

Infant Feeding Surveillance Knowledge Translation Project

Final Report and Analytic Guidance Documentation for
the 6-Month Retrospective Single Time Point Questionnaire



A Locally Driven Collaborative Project
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Acknowledgements

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Executive Summary

The Locally Driven Collaborative Project (LDCP) Knowledge Translation team is comprised of public health professionals from seven public health units (PHUs). We conducted a 14-month follow-up project to the LDCP Infant Feeding Surveillance Pilot Study, which recommended two standardized data collection options, one prospective and the other retrospective, for PHUs to collect required infant feeding surveillance data for Baby-Friendly Initiative (BFI) designation. We developed standard guidance for analyzing infant feeding surveillance data collected using one of the recommended data collection tool options, the Retrospective 6-Month Single Time Point Questionnaire (6MRQ). We developed resources including a data dictionary, three core indicator documents and a revised version of the questionnaire that addresses some identified issues and limitations of the 6MRQ.

The project team engaged with key stakeholders through several activities, including:

- A survey of staff at Ontario PHUs to collect information about current infant feeding surveillance practices across the province.
- A session at the 2016 Association of Public Health Epidemiologists in Ontario (APHEO) workshop to engage attendees in discussions about the successes and challenges of using the 6MRQ and conducting infant feeding surveillance in general. This session also served as a 'soft-launch' of the draft resources.
- A detailed peer review process to seek feedback on the analytic resources.
- Presentations at conferences to promote awareness and uptake of the analytic resources.

Feedback from stakeholders revealed a number of issues and limitations with the 6MRQ, which prompted the project team to amend the scope to include a revised version of the questionnaire as a deliverable. The revisions address most of the issues and limitations identified for the 6MRQ but are minor in nature, which minimize the disruptions for those already using the 6MRQ. A notable limitation of the 6MRQ is that it does not support the calculation of total breastfeeding rates, which is an optional indicator for BFI designation. Addressing this limitation would require considerable revisions to the questionnaire, and the project team determined that there was insufficient value to warrant the changes.

Our survey revealed that over half of Ontario's 36 PHUs have adopted the 6MRQ, or are planning to adopt in the near future. However, variations in infant feeding surveillance practices and local customizations of the tool may limit data comparability across PHUs. The significant variation in the implementation of the 6MRQ also presents a challenge for developing standard analytic guidance. The project team strongly encourages 6MRQ users to be cognizant of their individual PHU's customizations, and

to carefully adapt these standard analytic guidance resources accordingly. In the current landscape of infant feeding surveillance in Ontario, the analytic guidance resources provided here offer standard guidance to analyze local data that PHUs can use to meet requirements for BFI designation.



1. Background

This report describes the Infant Feeding Surveillance Retrospective 6-Month Single Time Point Questionnaire Knowledge Translation project, a 14-month follow-up project (Feb 2016 to Apr 2017) funded by a Knowledge Translation grant from Public Health Ontario's Locally Driven Collaborative Project (LDCP) program. The project team consisted of public health professionals from seven public health units (PHUs) that contributed to the LDCP Infant Feeding Surveillance Pilot Study conducted from 2013 to 2015. The original pilot study was a two-year project to develop a standardized tool and method for collecting infant feeding surveillance data to enable PHUs to have locally useful and externally comparable data. Collecting infant feeding surveillance data is a requirement of designation in the Baby-Friendly Initiative (BFI), administered by the Breastfeeding Committee for Canada (BCC). All PHUs are required to work toward BFI designation according to the 2011 Ministry of Health and Long-Term Care's Accountability Agreement.

Of the 36 PHUs in Ontario, 27 collaborated on the original Infant Feeding Surveillance Pilot Study project team. (1) Following the completion of that project, ongoing communication among PHUs identified that many had chosen to use the single time point survey; however, some PHUs reported that the LDCP Retrospective 6-Month Single Time Point Questionnaire (6MRQ) did not entirely meet their needs, and individual PHUs were making modifications for local use. The need to improve the questionnaire and data analysis was apparent, to ensure consistency provincially.

The objective of this Infant Feeding Surveillance Knowledge Translation Project was to support the recommendations of the LDCP project by providing guidance on analyzing infant feeding surveillance data collected using the 6MRQ.

Specific activities to meet this objective included:

1. To develop a user guide containing data dictionaries for the BFI Outcome Indicators as indicated by the BCC for BFI designation.
2. To write a guidance document for adapting the questionnaire for telephone data collection (as the original LDCP format was for online data collection).
3. To engage in knowledge translation activities, including sharing with the Provincial Infant Feeding Surveillance Group, and presenting at conferences and workshops and by webinar (e.g., the Public Health Ontario Rounds webinar series).

2. Methods

There were two main types of work in this project – the tasks related to engaging stakeholders, and those related to developing the analytic guidance resources.

2.1 Stakeholder engagement

The project plan identified four key stakeholder groups for engagement. Table 2.1 summarizes the key stakeholder groups and the activities through which each were engaged.

Table 2.1 Stakeholder groups and activities for engagement

Stakeholder name	Description of group	Project activities where engaged
Provincial Infant Feeding Surveillance Group (PIFSG)	A working group comprised of public health professionals in local PHUs, primarily members of the original Infant Feeding Surveillance Pilot Study project, with representation from over 30 Ontario PHUs. Members of this group meet regularly to exchange knowledge and discuss the challenges of implementing local infant feeding surveillance systems.	PHU survey, resource peer review, regular updates at PIFSG
Local PHU infant feeding surveillance teams	This group consists of epidemiologists, analysts, evaluators, health promotion specialists, and any other staff members responsible for analyzing the collected infant feeding data. These individuals generally appreciate clarity, technical details and practical applications to guide their analytic work.	PHU survey, resource peer review
The Association of Public Health Epidemiologists in Ontario (APHEO) membership	Full and affiliate members of APHEO, primarily consisting of PHU epidemiologists and analysts, but also includes individuals from a broader public health epidemiology community, e.g., from provincial or federal government agencies	PHU survey, APHEO workshop session, resource peer review
The BCC and BFI Ontario	BCC is the national authority for BFI implementation and can provide guidance on infant feeding data collection methodologies that meet BFI requirements. BFI Ontario is a multidisciplinary committee that guides and supports eligible facilities in achieving and maintaining BFI designation.	Direct consultations

The project team adopted the following approaches to engage these stakeholders throughout the project:

1. **PHU survey:** We conducted the survey in June 2016 to collect information on local infant feeding surveillance practices across the province, and to assess the uptake of the 6MRQ by Ontario PHUs.(2)
2. **APHEO workshop session:** We conducted a session at the APHEO workshop in November 2016 that provided attendees with background on why this project was formed and our objectives and deliverables. In the session we completed the following activities:
 - a. Presented findings from our PHU survey and provided a hard-copy draft of each resource (i.e., the data dictionary and the core indicator documents) developed to that date to each table of participants.
 - b. Facilitated discussion about experiences, challenges, needs and successes with the 6MRQ and with infant feeding surveillance in general
 - c. Provided a 'soft-launch' overview of the draft analytic guidance resources
 - d. Invited attendees to participate in the detailed resource peer review process
3. **Resource peer review:** We invited stakeholders via email and verbally at the APHEO session to participate in a detailed peer review of the draft analytic guidance resources developed in this project. All individuals who accepted the invitation to be peer reviewers were sent the draft resources and given approximately 4 weeks to complete their review. The peer review was completed between December 2016 and January 2017. The invitation to participate in the peer review process also included a supplementary invitation to review the draft Stata and SAS syntax. The smaller group of individuals who accepted the invitation to review the draft syntax also received this resource to review.
4. **PIFSG regular updates:** We provided regular updates, invited questions and sought input on specific issues. We also participated in spontaneous consultations and discussions of methodological and analytic issues with PIFSG members in PHUs using the 6MRQ.
5. **BCC/BFI Ontario consultations:** We consulted with representatives from BFI Ontario and the BCC throughout the project, for points of clarification about the BFI Outcome Indicators and for guidance on analysis and assessment of infant feeding surveillance data. This open communication was valuable to ensure the accuracy and broad applicability of the resources developed in this project. While

the BCC will not officially endorse or approve any resource they have not produced, their representative was able to confirm that the LDCP surveys, including the 6MRQ and the analytic guidance resources developed in this project, will meet data reporting requirements for BFI designation.(3)

6. **Conference/webinar presentations:** To broadly disseminate final project results, we also submitted abstracts at several conferences and in a webinar series that attract a broad range of stakeholders involved in BFI designation or infant feeding surveillance activities. The events include the Public Health Ontario Epidemiology Rounds, the 2017 BORN Ontario Conference, the 2017 Ontario BFI Expo, and the 2017 BCC National BFI Symposium.

2.2 Resource development

The project plan originally identified three resources for development:

1. A user guide with definitions and calculation methods for BFI Outcome Indicators and a data dictionary for the 6MRQ,
2. A guidance document for adapting the web-based 6MRQ methodology for telephone data collection, and
3. A series of case studies documenting PHU experiences with the 6MRQ.

Over the course of the project, new information arose and the evolving needs of the target audience became evident, and out of necessity the project team modified the nature of the resources for development. Most notably, PHUs already using the 6MRQ identified issues with the data collection tool itself that appeared to impact data analysis and thus warranted attention in this project. In response, the team added revising the 6MRQ as a new project deliverable and adapted the other resources accordingly.

Table 2.2 provides the list of resources that were ultimately developed and released by the project team.

Table 2.2 Overview of analytic guidance resources for use with the Retrospective 6-Month Single Time Point Questionnaire

Appendix	Name	Purpose
Found in separate report (Reference 2)	Public Health Unit survey results	Provides context of the landscape of infant feeding surveillance methods and activities in Ontario's PHUs as of June 2016, as well as some description of challenges and successes users have had with 6MRQ.
A	Core indicators - Breastfeeding initiation - Any breastfeeding - Exclusive breastfeeding - Adapting the core indicators for use with the revised questionnaire	Provides detailed description of how to calculate each indicator including calculation formula, analysis notes, and a flowchart for visual illustration of how relevant survey questions are used in the calculation. The final section also provides users with details on how to adapt the calculation method when the revised 6MRQ tool is used.
B	Revised Retrospective 6-Month Single Time Point Questionnaire (English only)	Provides users with an updated version of the 6MRQ tool that addresses some identified issues with the original questionnaire.
C	Stata syntax	Can be used in Stata software to calculate the three types of core indicators for a dataset formatted as per the data dictionary.
D	SAS syntax	Can be used in SAS software to calculate the three types of core indicators for a dataset formatted as per the data dictionary.
E	Data dictionary	Provides users with standard labels and formats and other information for each survey question and response.
F	Revised data dictionary content for use with the revised questionnaire	Provides users with details on where and how to adapt the data dictionary when the revised 6MRQ tool is used.

The project team began developing these resources at a face-to-face meeting on March 31 and April 1, 2016, where they discussed all the BFI Outcome Indicators that could be analyzed using infant feeding surveillance data collected with the 6MRQ, the details of which survey questions were needed for specific indicator, and how each indicator would be calculated. We completed the majority of the resource development work

remotely from April to November 2016, meeting at least monthly via teleconference to keep the project on track.

We adapted APHEO's Core Indicator template to document how users should calculate the BFI Outcome Indicators (see the APHEO core indicators project web page for examples). (4) Our rationale for using a similar template to the APHEO Core Indicators was that most anticipated primary users of these resources, epidemiologists and analysts in Ontario PHUs, would already be familiar with this documentation format.

We developed the data dictionary by translating the 6MRQ survey questions and metadata into a table format. We reviewed other examples of data dictionaries, such as those from Statistics Canada's Canadian Community Health Survey, for ideas on important fields to include in the data dictionary that would aid users in interpreting and formatting 6MRQ datasets.

It became apparent by July 2016 that the potential issues and limitations of the 6MRQ being flagged by current users needed to be addressed within the scope of this project. In August the project team formally added a new resource to the project scope – a revised version of the 6MRQ. The project team consulted with current users of the 6MRQ and developed a list of potential issues and limitations with the data collection tool. We held a second face-to-face meeting in November 2016 to discuss in detail and make decisions on each potential issue or limitation. The output of this meeting was a list of unique issues or limitations, and decisions made to address them (see Section 3.2.3). The project team applied these decisions to the 6MRQ tool itself – the revised version is available in English only (Appendix B).

The statistical syntax included in this report is considered a supplemental resource. Systematic development and thorough validation of statistical software syntax is time-consuming, and was beyond the scope of this project. Even so, Stata and SAS syntax programs were developed independently by project team members for use in their own PHU's infant feeding surveillance systems. The team identified the syntax as potentially helpful resources for other 6MRQ users, and as such, completed some additional work to validate the two versions of the syntax against one another, and included them in the peer review. Ultimately the syntax programs were deemed functional and useful. Both the Stata and SAS syntax are included in this report. Note that due to time and resource constraints, alternate versions of the syntax that would account for use of the revised 6MRQ were not provided.

3. Results

3.1 Stakeholder engagement

3.1.1 Public health unit survey

We received responses from 31 of the 36 PHUs in Ontario (an 86.1% response rate). Nearly all the PHUs reported that they have established an infant feeding surveillance system (n=28/31; 90.3%). Of the participating PHUs, the majority (n=19; 61.3%) had achieved BFI designation by June 2016 - the time of survey - while the remainder (n=12; 38.7%) had not.

The PHUs that were either currently using or planned to use the 6MRQ in their local infant feeding surveillance systems, indicated efficiency, consistency, flexibility, meeting the requirements for BFI designation, and that it is deemed a high quality survey, as factors influencing their choice. Eight (25.8%) of the PHUs reported they were currently using the 6MRQ while another ten (32.3%) PHUs anticipated implementing the 6MRQ within the next 18 months. There were thirteen PHUs (41.9%) that indicated they were not currently using the 6MRQ, nor were they planning to implement its use.

More detailed results from our PHU survey are available in a previous report. (2)

3.1.2 APHEO workshop session

Each table of participants was given a discussion theme. These themes were identified through discussion amongst all participants early in the session, and included interests, challenges, and needs related to infant feeding surveillance as well as barriers and challenges identified with the original LDCP questionnaires. Each table was asked to brainstorm and discuss solutions to address the identified challenge(s). Following the brainstorming exercise, the discussions were documented on flip-chart paper and collected. After the workshop we collated and summarized the discussion items.

In general, session participants agreed that that Knowledge Translation project team was on the right track to standardize data analysis by developing the analytic guidance documents. There were questions about whether the 6MRQ was ready for use and whether it met the surveillance requirements for BFI designation. Session participants also raised a number of concerns related to infant feeding surveillance in general, but these issues were outside the scope of this Knowledge Translation project. These broader concerns included challenges with obtaining consent for infant feeding surveillance, the need to validate the questionnaire, recommended methodologies for more advanced analysis of infant feeding surveillance data (e.g., life-table regression, multiple imputation), and creation of standardized data reports.

3.1.3 Peer review of resources

After reviewing the feedback and comments provided at the APHEO workshop, we incorporated some subsequent changes into the indicator documents and data dictionary. A total of 13 stakeholders were recruited for participation in a peer review of the analytic guidance documents. Seven of these stakeholders were individuals from PHUs that were using the 6MRQ for infant feeding surveillance; four were from PHUs not currently using the 6MRQ; one was the project lead for the original LDCP Infant Feeding Surveillance Pilot Study project who developed the 6MRQ; and one was a Senior Health Analyst from the Ministry of Health and Long Term Care.

Although all feedback was welcome, we requested that the review focus particularly on accuracy (i.e., do the resources accurately correspond to the BFI requirements for breastfeeding statistics?; do they accurately correspond to the 6MRQ data collection tool?), usefulness (are the resources successful in aiding users of the 6MRQ to analyze their infant feeding surveillance data for the purpose of reporting BFI indicators?) and readability (to what extent are the resources clear and easy to understand?). We collated all of the feedback we received from the peer reviews, made decisions about each piece of feedback, and revised the analytic resources accordingly.

3.1.4 Future conference presentations

The abstracts we submitted to present the results of our project were accepted for several events that attract a broad range of stakeholders involved in BFI designation or infant feeding surveillance activities. Project team members have presented at the Public Health Ontario Epidemiology Rounds (April 20, 2017) the 2017 BORN Ontario Conference (April 24, 2017), and will present at the Ontario BFI Expo (May 2017), and the BCC National BFI Symposium (September 2017).

3.2 Resources

The following sections describe the final resources that were developed. For an overview of the resources and where resources are located, see Table 2.2 in Section 2.2.

3.2.1 Core indicators

Core indicator documents were developed for three breastfeeding surveillance indicators – breastfeeding initiation, any breastfeeding, and exclusive breastfeeding. All of these indicators are required surveillance indicators for BFI designation. The 6MRQ may be used to calculate any breastfeeding rates and exclusive breastfeeding rates for any time point up to and including 6 months of age.

Each core indicator document includes a description of the indicator, method of calculation based on questions in the 6MRQ, a complementary flow chart to illustrate the analysis logic, and relevant notes for analysis, reporting and interpretation of the

indicator. At the end of the appendix there is also a section describing how and where to modify the core indicator calculations when the revised 6MRQ is used.

3.2.2 Recommended revisions for the Retrospective 6-Month Single Time Point Questionnaire

PHUs currently using the 6MRQ identified numerous issues and limitations with the questionnaire. Table 3.1 summarizes these issues along with the decisions and recommended revisions by the project team. The final revised version of the 6MRQ is available in English only.

Table 3.1 Summary of issues and limitations identified with the Retrospective 6-month Single Time Point Questionnaire and details of revisions

Number	Issue or limitation	Decision	Details of revision
1	Error in flow chart for section 6 but not in the survey. Flow chart shows section 6 is answered if Q7=formula, needs fixing.	Not applicable	No change. This is an issue with a flow chart in the LDSP Infant Feeding Surveillance Pilot Study Final Report, but it is irrelevant to the retrospective 6-month questionnaire itself.
2	Q7 suggests changing responses to "Breastmilk only" and "Formula only"	Not revised	No change. This edit would result in little change to the meaning and was deemed not a priority.
3	Q12 has a skip pattern issue. Believes Q13 still applicable if Q9 is don't know or refused	Revised	Removed "Don't know/refused" from Q12 skip pattern prompt as these cases won't be asked Q12 to begin with. If Q9=yes or no, go to Q13. All Q12 respondents are now directed to Q13.
4	Section 6 is skipped in the questionnaire but not in the flowchart for those answering Section 5	Not applicable	No change. This is an issue with a flow chart in the LDSP Infant Feeding Surveillance Pilot Study Final Report, but it is irrelevant to the retrospective 6-month questionnaire itself.
5	Q44 is hard for caller to quickly categorize ethnicity into the listed responses	Not revised	No change. Although we agree that this is a challenge for telephone administration of the survey, we also recognize PHUs may choose to customize their survey questions related to ethnicity to improve ease of use. E.g., some PHUs may ask, "What country were you born in?" or "What country did you move from?"

Number	Issue or limitation	Decision	Details of revision
6	Does not support the analysis of early breastfeeding initiation indicator (i.e., initiate breastfeeding within one hour after birth).	Not applicable	No change. Confirmed with the BCC that Q9 satisfies the definition of the breastfeeding initiation indicator (i.e. "ever attempted to breastfeed").
7	Q11 and Q21. Problems expressing or delivering breastmilk is classified as baby reasons but should be maternal reasons	Revised	For both Q11 and Q21, moved "Problems expressing or delivering breastmilk" from "Baby Reasons" to "Maternal Reasons"
8	Q7. Changing response options to: breastmilk only, formula only, combination of breastmilk and formula, no breastmilk nor formula, don't know, refused	Revised	Added "No breastmilk nor formula" as a new response option to Q7, with the notion that this situation would warrant Public Health support. All survey responses are contingent on Q7 so if they answer "don't know" or "refused" they must exit the survey.
9	Q8. Wording assumes all babies are born in hospital	Revised	<p>Disagreed that the wording assumes all babies are born in hospital. Q8 is actually helpful in identifying whether formula was given at all in the hospital setting. This question applies to babies born in hospitals as well as those with medical conditions that later require readmission to hospitals. Question wording should be left as is to serve as a memory prompt for mothers.</p> <p>Once we agreed on the interpretation of Q8, we realized that there was an issue with the skip pattern for Q13. Skip pattern assumed that when Q13=Yes, the hospitalization was at time of birth so Q14 was skipped. This assumption is not always true and there is no way to identify at what age the hospitalization occurred. To correct this problem, we decided to change the skip pattern prompt for Q13 so that all respondents are sent to Q14, which asks at what age formula is first introduced.</p>

Number	Issue or limitation	Decision	Details of revision
10	Q9. If you attempted to breastfeed and the attempt wasn't successful, Q10 doesn't make sense to answer	Not revised	No change. We do not want to ask mothers how many times they attempted to breastfeed. It makes sense as a 'yes' or 'no' question. It serves the intended purpose as is.
11	Q13. Question assumes moms gave birth in hospital. Recommendation to determine where baby was born at the beginning of survey	Revised	No change made to Q13; see details of revision for issue #9.
12	Q10. Remove the "in months" reference within the question as respondents may be answering in weeks. Similar to Q26, Q28, etc.	Not revised	No change. PHUs have the option of removing "in months" reference within the questions in their own version of the survey.
13	Q24. Consider adding in cows milk as a liquid being given	Not revised	No change. PHUs have the option of adding "cow's milk" as an example of other liquid since it is known to be a common substitute.
14	No questions about introduction to other liquids, vitamin D supplementation, feeding in hospital, or breastfeeding support and concerns	Not revised	No change. These questions are included in the 6MRQ, either as core or optional content. See the LDCP Infant Feeding Surveillance Pilot Study Final Report.
15	Does not support the calculation of entry to service, and total breastfeeding rates at 2 and 4 months.	Not revised	No change. PHUs can calculate entry to service breastfeeding rates using BORN data. We agree that total breastfeeding rates cannot be calculated using the retrospective 6-month questionnaire. This is a limitation, but given that total breastfeeding rates are an optional BFI indicator to report to BCC, there was not enough interest in these indicators to warrant making significant changes to the questionnaire to attempt to accommodate total breastfeeding rate calculation.

Number	Issue or limitation	Decision	Details of revision
16	Q35 Need to be re-worded for clarity. "Prior to this (these) babies, have you breastfed or tried to breastfeed before?"	Revised	Q35 was reworded as follows: "Prior to this baby (or these babies in the event of multiples), have you breastfed or tried to breastfeed before?"
17	Q29. Recommend changing question wording to "When you introduced solids, was it due to a recommendation by a health care provider?"	Revised	Q29 was reworded as follows: "When you introduced solid foods at that time, was it because a health care provider recommended it?"
18	Q30. Need to add health care provider as a reason	Not revised	No change. We believe the question is appropriate as is.
19	For questions in section 9, does not make sense to ask a multiparous client who has not breastfed this baby or ever in the past if they used our breastfeeding programs/services.	Not revised	No change. We believe the question is appropriate as is.
20	Does not allow for combo feeding rate for any time point other than 6 months because respondents were not asked if they continued providing formula/other liquid/solid once it was introduced the first time	Not revised	No change. This item goes back to the issue of not being able to calculate total breastfeeding rates; see details of revision for issue #15.
21	Calculating any breastfeeding rate based on retrospective survey: Assumes breastfed since birth (never asked when breastmilk/breastfed first introduced; did baby ever stop breastfeeding for >24hrs at any point)	Not revised	No change. We decided this is a reasonable assumption in the vast majority of cases; and even in the rare instances where the assumption is violated, this would imply clients are achieving desired outcomes (i.e., resuming breastfeeding after stopping).
22	Q39. Response option assumes that the minimum level of education possible is "some high school"	Revised	Changed first response option from "Some high school" to "some high school or less"

3.2.3 Stata and SAS syntax

We also provided Stata and SAS statistical syntax to calculate the BFI Outcome Indicators – breastfeeding initiation, any breastfeeding, and exclusive breastfeeding. These two versions of the statistical syntax were developed independently by project team members for use in their own PHUs infant feeding surveillance systems and are considered supplementary to the other resources.

Note that both the Stata and SAS syntax are coded based on variable names and response codes as per the standard data dictionary. Note also that both syntax programs are coded for use with the original 6MRQ and, at this time, do not account for the revised version of the 6MRQ. Users who adopt the revised version of the 6MRQ are cautioned to adapt these syntax programs accordingly.

3.2.4 Data dictionary

The data dictionary lists all of the questions from the 6MRQ and provides a variable name and label for each question, their response options as provided in the original survey, and the universe (i.e., a description of the survey respondents for which the question applies). Each of the possible responses has been given a numerical code, where possible, to aid in data processing and analysis.

Please note that PHUs may customize the 6MRQ tool to meet their local needs. As such, this data dictionary may serve as a starting point for PHUs using a modified version of the 6MRQ, or for transitioning to the use of the 6MRQ for the first time. We recommend that any PHU-specific modifications made to the 6MRQ should use distinctly different variable names and labels, to be clearly differentiated from the standard data dictionary elements.

It is important to recognize that due to the variety of statistical software being used in PHUs, as well as varying methods of data collection, considerable data processing is likely required before any given dataset will be formatted to properly align with the standard data dictionary. It is the responsibility of each analyst to ensure their PHU dataset is cleaned accordingly, and to generate and recode variables where necessary.

Note also that a subsequent appendix provides revised sections of the data dictionary for when the revised 6MRQ is used. The rows in that table can simply be substituted in for the corresponding rows of the original data dictionary to adjust the data dictionary to accurately reflect all variables, fields and responses in the revised 6MRQ.

3.2.5 Differences in use of the Retrospective 6-Month Single Time Point Questionnaire for telephone and web survey data collection

One consideration from the LDCP Infant Feeding Surveillance Pilot Study was the use of various data collection systems. The original pilot was conducted via both telephone and online platforms. The actual method of infant feeding surveillance data collection

varies across PHUs, with some PHUs offering a telephone survey, some an online or web survey, and some offering both. While we identified no differences in the skip patterns if using the 6MRQ as a telephone or web survey, some questions or response options may be applicable in a telephone survey but not a web survey. For example, when conducted via telephone, the interviewer may have access to demographic or clinical data, including the mother's and baby's date of birth, which may negate the necessity of asking these questions except for confirmation purposes. In a web survey, question Q5a from the 6MRQ may need to be excluded and ask only Q5b. In addition, questions pertaining to referrals (Q47 and Q48) would not be applicable in a web survey.

In the case of multiple response questions, it may not be necessary for an interviewer to read all of the possible selections when in a telephone survey, whereas multiple response questions in a web survey must be listed for a respondent to select from. The use of prompts or definitions may also differ between a telephone survey and a web survey. Additionally, the way in which multiple births (Q6) are handled in a telephone survey may differ from a web survey.

4. Limitations

4.1 Limitations of the Retrospective 6-Month Single Time Point Questionnaire

There are three key limitations of the 6MRQ that remain even after the recommended revisions are implemented. Specifically, it does not support calculation of the following breastfeeding surveillance indicators:

1. Breastfeeding rates at entry to service
2. Total breastfeeding rates¹ or
3. Breastfeeding rates beyond 6 months.

Breastfeeding rates at entry to service

Entry to service is a required surveillance time point for BFI designation. A recommendation put forward by the LDCP Infant Feeding Surveillance Pilot Study is that PHUs would use data from BORN Ontario (Better Outcomes Registry & Network) to assess breastfeeding rates at entry to community health service. BORN is Ontario's

¹ Total breastfeeding is defined as "babies who were supplemented at some time and are now exclusively breastfeeding again". This definition is found in a footnote on page 33 of the BFI Outcome Indicators document by BCC. (3)

perinatal birth registry that captures data on all pregnancies and births in Ontario, and most Neonatal Intensive Care Unit admissions. PHUs can access the data collected in the BORN Information System either through the PHU data cubes or standard reports. Details on how to calculate breastfeeding rates at entry to service using BORN data can be found in the corresponding APHEO core indicator document.(6)

Total breastfeeding rate

It is not possible to discern “total breastfeeding babies”, i.e., those infants who had been supplemented at some time and are now being fed exclusively breastmilk again, using the 6MRQ, due to retrospective nature of the tool and the question wording.

Throughout the stakeholder engagement process, a few PHUs indicated total breastfeeding rates were a useful indicator that they wanted to report on, but discovered after adopting the 6MRQ that they were unable to do so. Ultimately, we decided not to undertake questionnaire modifications that would be necessary to allow calculation of total breastfeeding rates, for two reasons:

1. Total breastfeeding rates are an optional surveillance requirement for BFI designation.(5)
2. This was the only limitation identified that would have required significant changes to the questionnaire. Significant changes should be avoided to ensure data comparability for PHUs that have already adopted the original version of the 6MRQ. There was also insufficient interest from PHU stakeholders to warrant making the required significant changes.

Breastfeeding rates beyond 6 months

The BCC requires that community health agencies conduct infant feeding surveillance beyond 6 months. When collecting infant feeding data beyond 6 months, PHUs may choose to adopt the 12-Month Time Point Questionnaire developed by the LDPC Infant Feeding Surveillance Pilot Study. This survey can also be adapted to additional time points after 6 months (e.g., 18 or 24 months) by making minor modifications to the response options of selected questions in the questionnaire.

Note that another LDPC Knowledge Translation project has been launched as of March 2017. Like the current project, it will aim to produce standardized analytic guidance documents and statistical syntax for the prospective data collection option and will include guidance for the 12-Month Time Point Questionnaire, along with the two other prospective questionnaires at 2 months and 6 months. The anticipated completion of the prospective analysis Knowledge Translation project is spring 2018.

4.2 Project limitations

There were some limitations to this Knowledge Translation project. In our stakeholder engagement activities, we accessed target groups primarily via the APHEO listserv and

through email communication and teleconferences with the PIFSG members. Given that not all PHU staff involved in local infant feeding surveillance activities participate in these two groups, some perspectives and opinions may have been missed.

One significant challenge throughout this project was the imminent need of PHU users for these analytic guidance documents. There is obvious demand for these resources and they should prove valuable to PHU users moving forward. However, for some PHUs who had already begun to collect infant feeding surveillance data using the 6MRQ, the project timelines did not meet their immediate requirements for analytic guidance. Out of necessity some PHUs may have developed their own methods of analyzing their 6MRQ infant feeding data. To realize the goal of externally comparable infant feeding data, we hope that PHUs using independently-developed analytic methods will find these new resources helpful in aligning their methods to the standard ones recommended here.

Another significant challenge with the project is that the 6MRQ has been adapted and modified by individual PHUs to meet their own local needs. Further, PHUs are using different databases to collect infant feeding surveillance data and are applying variants of the standard methodology recommended from the original LDCP Infant Feeding Surveillance Pilot Study project. All of these customizations by individual PHUs make it difficult to develop analytic guidance that will work for all users. Users are strongly encouraged to be cognizant of the details of their PHUs' local customizations of the 6MRQ, and to carefully adapt these standard analytic guidance resources in such a way as to account for these customizations.

5. Conclusions

This Knowledge Translation project continues the work of the LDCP Infant Feeding Surveillance Pilot Study, providing detailed analytic guidance for the purposes of BFI designation for one of the two recommended data collection tools from the pilot study, the 6MRQ. The guidance resources include a data dictionary, three core indicator documents, and a revised version of the questionnaire that accounts for some issues and limitations identified by current users.

The project engaged with stakeholders, primarily APHEO members and PIFSG members, to better understand the needs of PHU staff involved in local infant feeding surveillance activities in general and of 6MRQ users specifically. The level of interest of key stakeholders was high, and the feedback we received throughout the project was both plentiful and helpful. In particular, stakeholders informed the project team of a variety of issues and limitations that had arisen with use of the 6MRQ thus far, which was important and timely feedback that led our project team to revise the 6MRQ and explicitly describe its outstanding limitations. The stakeholder engagement was a critical

part of the process, to ensure the analytic guidance resources would be both highly relevant and useful.

According to responses from our PHU survey conducted in June 2016, over half of Ontario's 36 PHUs have already adopted (or are planning to adopt in the near future) the 6MRQ as their infant feeding surveillance data collection tool. Despite its widespread uptake across the province, it is clear that there is considerable variation in the implementation of this tool, with customizations made by PHUs to methods and the tool itself, in order to meet local needs. These variations in methodologies will likely limit the comparability of infant feeding data between PHUs using the 6MRQ, although the extent to which comparability is affected is not well understood. The project team strongly encourages 6MRQ users to be aware of their individual PHU's customizations from the standard recommended tool and methods, and to carefully adapt these standard resources accordingly.

The Knowledge Translation project team acknowledges that the LDCP Infant Feeding Surveillance Pilot Study has made significant contributions in moving Ontario PHUs towards the broader goal of having locally useful and externally comparable infant feeding surveillance data across the province. At the same time, we also recognize that universal adoption of one standardized infant feeding surveillance tool and method across the province is unlikely to occur in the foreseeable future without some provincial leadership or support to standardize infant feeding surveillance practices across Ontario. In the current landscape, the resources provided in this report fulfill a previously unmet need of the PHUs who have adopted the 6MRQ, by providing guidance to analyze local infant feeding surveillance data to meet requirements for BFI designation.



References

1. Haile R., Procter TD., Alton GD. et al. on behalf of LDCP Breastfeeding Surveillance Project Team. (2015). Infant Feeding Surveillance Pilot Study: Final Report and Recommendations. Woodstock, Ontario, Canada. Retrieved April 5, 2017 from:
www.publichealthontario.ca/en/ServicesAndTools/Documents/LDCP/LDCP_Breastfeeding_Project_Final_Report_2015.pdf
2. te Nyenhuis E, Deming J, Dupuis S, et al. (2017). Infant Feeding Surveillance Knowledge Translation Project: Summary Report of Public Health Unit Use of the 6-Month Retrospective Single Time Point Questionnaire. Newmarket, Ontario, Canada. Retrieved April 5, 2017 from:
http://www.publichealthontario.ca/en/ServicesAndTools/Documents/LDCP/IFS%20KE%20project_6MRQ_PHU_Survey_Report_March2017.pdf
3. Breastfeeding Committee for Canada (2012). BFI Integrated 10 Steps Practice Outcome Indicators for Hospitals and Community Health Services. Retrieved April 5, 2017 from: http://www.breastfeedingcanada.ca/documents/2012-05-14_BCC_BFI_Ten_Steps_Integrated_Indicators.pdf
4. Association of Public Health Epidemiologists in Ontario (APHEO). Core Indicators Project. Retrieved April 5, 2017 from;
<http://core.apheo.ca/index.php?pid=55>
5. M La Salle. Personal communication. December 21, 2016.
6. APHEO Reproductive Health Core Indicators Sub-group. Infant Feeding Core Indicator. Retrieved April 5, 2017 from:
<http://www.apheo.ca/upload/membership/forum/infant-feeding-2.pdf>

Appendix A – Core Indicators for the Retrospective 6-Month Single Time Point Questionnaire

Breastfeeding Initiation Core Indicator

Description

- The proportion of babies who attempted to, or did receive, any amount of human milk (including expressed milk, donor milk) at any point following birth¹, even if only for a short time.

Indicator and method of calculation

Specific indicator

- Breastfeeding initiation

Breastfeeding initiation

$$\frac{\text{Total number of babies who attempted to, or did receive, any amount of human milk (including expressed milk, donor milk) at any point following birth, even if only for a short time}}{\text{Total number of babies for whom the survey was completed}} * 100$$

Data notes

- Refer to the derived variable dEligible in the Retrospective 6-Month Single Time Point Questionnaire (6MRQ) for inclusion criteria.²
- To evaluate breastfeeding rates at about 6 months, a time point of 5.5 months may be used.^{3,4}

Mandatory reporting requirement

- For Baby-Friendly Initiative (BFI) designation for community health services, surveillance requirements include recording data on entry to service and a minimum of two additional time frames (e.g., 2 or 4 months) and up to 6 months ('at about' 6 months¹⁻³).

Indicator objectives

- To demonstrate the proportion of babies entering into the community health service in the past year that initiated breastfeeding (including expressed milk, donor milk), even if only for a short time.

Data sources

- Numerator & denominator:** Locally Driven Collaborative Project (LDCP) Retrospective 6-Month Single Time Point Questionnaire (6MRQ).²
- Suggested citation:** <Public Health Unit>, infant feeding surveillance data, collected using the LDCP 6MRQ.

- **Core indicator documentation distributed by:** Infant Feeding Surveillance 6MRQ Knowledge Translation Project team.

Analysis checklist

- There are three pathways branching from Question 7 that are relevant to the analysis of this indicator. Question 7 asks what [milk] has baby been fed in the past week. There are three possible response options (i.e., breastmilk, a combination of breastmilk and formula, and formula) and each option creates a different analysis pathway for this indicator. Refer to Figure 1 for a visual illustration of these pathways.
- Relevant questions for analysis under each pathway are listed in Table 1.

Notes

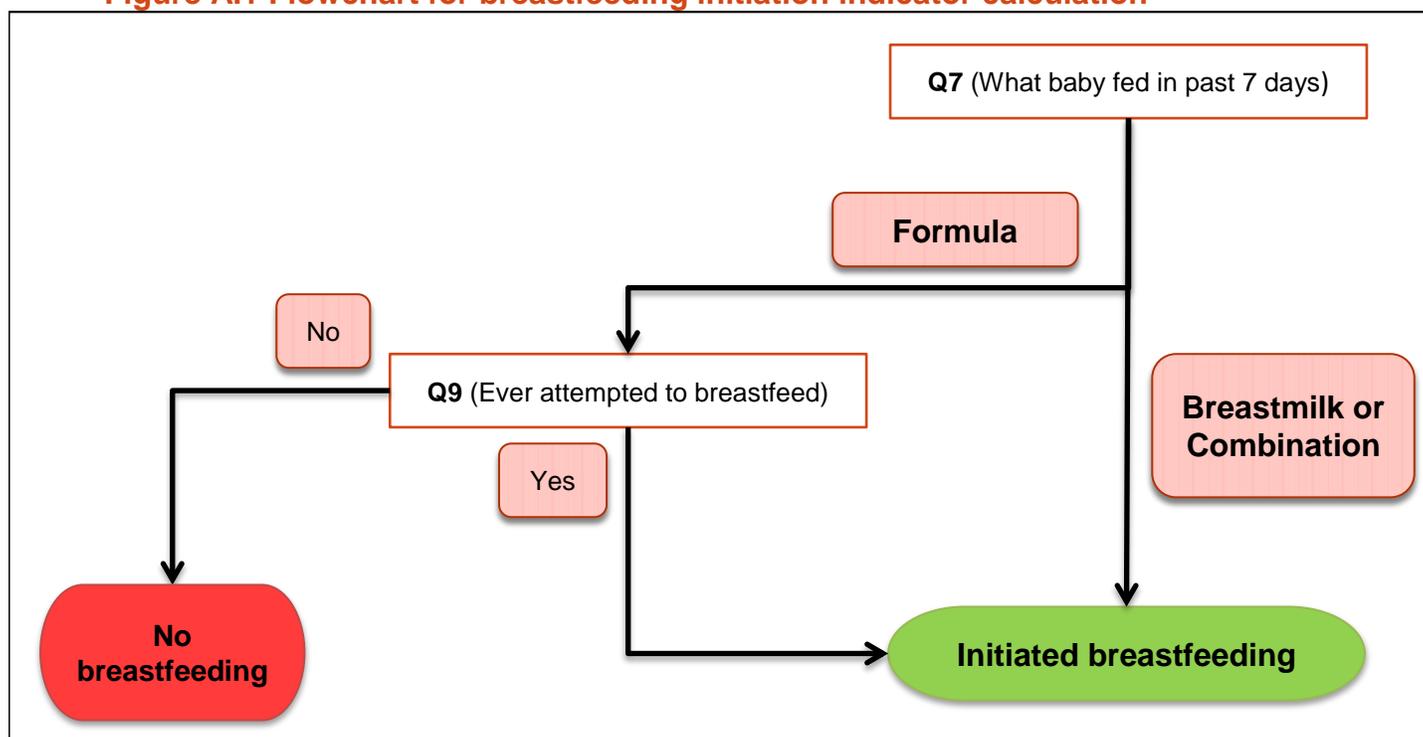
- There are no recommended data suppression guidelines; analysts are advised to adhere to any relevant public health unit policy or legislation.
- Data collection methodology may vary by public health unit, including online or telephone data collection.
- Refer to the 6MRQ data dictionary for coding variables.⁵
- Refer to ‘LDCP Infant Feeding Surveillance Pilot Study: Final Report and Recommendations’ for sample size calculations.²
- Exclude participants who could not be reached to complete the questionnaire.²

Table A.1 Relevant questions for breastfeeding initiation indicator, pathways based on responses to Question 7

1. Breastmilk	2. Combination of breastmilk and formula	3. Formula
Q7: In the past week, what have you fed your baby? By this, we mean what milk?	Q7: In the past week, what have you fed your baby? By this, we mean what milk?	Q7: In the past week, what have you fed your baby? By this, we mean what milk?
		Q9: Since birth, have you attempted to breastfeed or provide breastmilk to your baby, even if only once?



Figure A.1 Flowchart for breastfeeding initiation indicator calculation



Note: Only questions and response options relevant to this indicator are pictured in the flowchart.

Indicator comments

- For reporting breastfeeding initiation at entry to community health services, it is recommended that public health units (PHUs) use the dimension **Feeding at hospital or Midwifery Practice Group (MPG)** with the measure **# of births – discharged home or home births** from the Better Outcomes Registry & Network (BORN) Information System.
 - The use of the 6MRQ to determine breastfeeding initiation is an optional method.
- The Infant Feeding Surveillance 6MRQ Knowledge Translation Project team recommends that stratified analyses be conducted at the discretion of the individual PHUs. Pre-defined indicators for sub-populations are not provided.
- It cannot be definitively determined if breastfeeding was initiated immediately after birth, or if there were periods when breastfeeding ceased temporarily. If the infant was fed any breastmilk in the past 7 days, it must be assumed that they had also been fed breastmilk at prior time points (e.g., 2, 4, or 6 months), unless responses indicate otherwise.
- For a variety of reasons, not every baby may have a 6MRQ completed. Therefore, the indicator ‘entry to service’ cannot be calculated using data collected with the 6MRQ.

Ontario Public Health Standards (OPHS)

- The Ontario Public Health Standards (OPHS) establish requirements for the fundamental public health programs and services carried out by boards of health, which include assessment and surveillance, health promotion and policy development, disease and injury prevention, and health protection. The OPHS consist of one Foundational Standard and 13 Program Standards that articulate broad societal goals that result from the activities undertaken by boards of health and many others, including community partners, non-governmental organizations, and governmental bodies. These results have been expressed in terms of two levels of outcomes: societal outcomes and board of health outcomes. Societal outcomes entail changes in health status, organizations, systems, norms, policies, environments, and practices and result from the work of many sectors of society, including boards of health, for the improvement of the overall health of the population. Board of health outcomes are the results of endeavours by boards of health and often focus on changes in awareness, knowledge, attitudes, skills, practices, environments, and policies. Boards of health are accountable for these outcomes. The standards also outline the requirements that boards of health must implement to achieve the stated results.

Assessment and/or surveillance requirements related to this indicator

- The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the Population Health Assessment and Surveillance Protocol, 2008 (or as current) in the areas of breastfeeding (see Child Health Standard Requirement #1).
- The board of health shall report on the Health Promotion Indicator 16: Baby-Friendly Initiative (BFI) Status.
<http://www.ontario.ca/publichealthstandards>

Cross-references to other indicators

- Canadian Community Health Survey. Maternal experiences – Breastfeeding (MEX) Module, and the derived variables MEXDEBF2 and MEXFEB6.

Cited references

1. Breastfeeding Committee for Canada (BCC). (2012, May). BFI integrated 10 steps practice outcome indicators for hospitals and community health services. Retrieved April 5, 2017 from http://www.breastfeedingcanada.ca/documents/2012-05-14_BCC_BFI_Ten_Steps_Integrated_Indicators.pdf
2. Haile R., Procter TD., Alton GD. et al. on behalf of LDCP Breastfeeding Surveillance Project Team. (2015). Infant Feeding Surveillance Pilot Study: Final Report and Recommendations. Woodstock, Ontario, Canada. Retrieved April 5,

2017 from:

www.publichealthontario.ca/en/ServicesAndTools/Documents/LDCP/LDCP_Breastfeeding_Project_Final_Report_2015.pdf

3. M. Green, personal communication, May 18, 2016.
4. M. LaSalle, personal communication, Mar 22, 2017.
5. te Nyenhuis E., Deming J., Dupuis S., et al. Data Dictionary for the 6-Month Retrospective Time Point Questionnaire (Version 2.2 Release: 05 April 2017). Appendix E of Infant Feeding Surveillance Knowledge Translation Project: Final Report and Analytic Guidance Documentation for the 6-Month Retrospective Single Time Point Questionnaire.

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Changes made

Date	Type of review - Formal review or ad-hoc process	Changes made by	Description of changes



Any Breastfeeding Core Indicator

Description

- The proportion of babies who, as of <TIME>, were receiving human milk (including expressed milk, donor milk) with or without other liquids or solid foods.¹
 - Any breastfeeding includes both exclusive and non-exclusive breastfeeding.
 - Other liquids do not include vitamins or medications.
 - <TIME> may be equal to or less than the time point when the questionnaire was administered. A time point of 5.5 months may be used to evaluate breastfeeding rates 'at about' 6 months for Baby-Friendly Initiative (BFI) designation purposes.^{2,3} Common time points for reporting to the Breastfeeding Committee for Canada (BCC) include breastfeeding at 2 weeks, 2 months, 4 months, and 6 months postpartum.

Indicator and method of calculation

Specific Indicator

- Any breastfeeding as of <TIME>.

Any breastfeeding

Total number of babies who, as of <TIME>, were receiving human milk (including expressed milk, donor milk) with or without other liquids or solid foods

* 100

Total number of babies for whom the survey was completed

Data notes

1. To evaluate breastfeeding rates at about 6 months, a time point of 5.5 months may be used.^{2,3}
2. The numerator includes both exclusive and non-exclusive breastfeeding.
3. Refer to the derived variable dEligible in the Retrospective 6-Month Single Time Point Questionnaire (6MRQ) data dictionary for inclusion criteria.⁴

Mandatory reporting requirement

- For Baby-Friendly Initiative (BFI) designation for community health services, surveillance requirements include recording data on entry to service and a minimum of two additional time frames (e.g., 2 or 4 months) and up to 6 months ('at about' 6 months¹⁻³).

Indicator objectives

- To demonstrate the any breastfeeding rate for babies at the community health services level.

Data sources

- **Numerator & denominator:** Locally Driven Collaborative Project (LDCP) Retrospective 6-Month Single Time Point Questionnaire (6MRQ).⁶
- **Suggested citation:** <Public Health Unit>, infant feeding surveillance data, collected using the LDCP 6MRQ.
- **Core indicator documentation distributed by:** The Infant Feeding Surveillance 6MRQ Knowledge Translation Project team.

Analysis checklist

- There are three pathways branching from Question 7 that are relevant to the analysis of this indicator. Question 7 asks what [milk] has baby been fed in the past week. There are three possible response options (i.e., breastmilk, combination of breastmilk and formula, and formula) and each option creates a different analysis pathway for this indicator. Refer to Figure 2 for a visual illustration of these pathways.

Notes

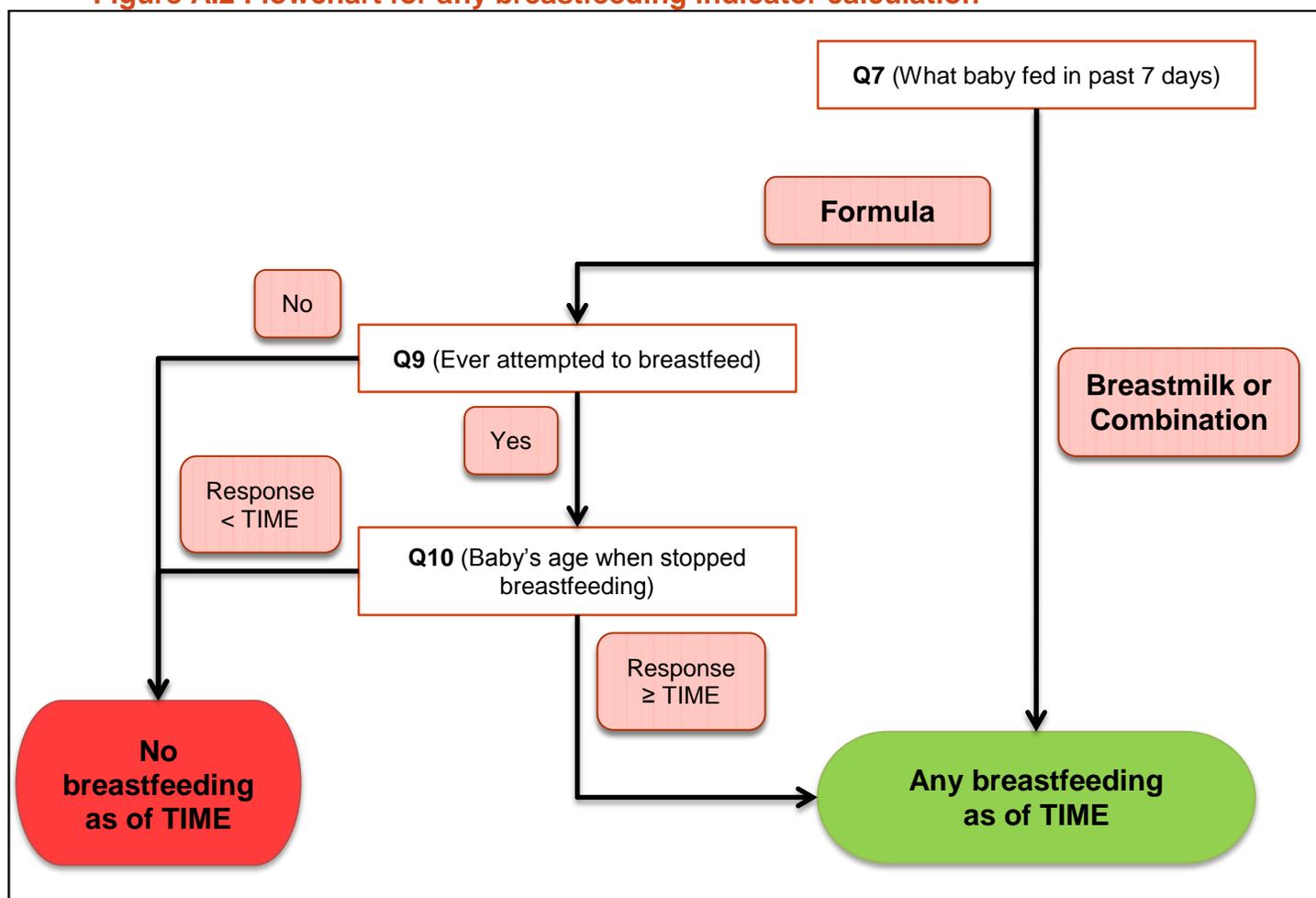
- There are no recommended data suppression guidelines; analysts are advised to adhere to any relevant public health unit policy or legislation.
- Data collection methodology may vary by public health unit, including online or telephone data collection.
- Refer to the 6MRQ data dictionary for coding variables.⁴
- Refer to ‘LDCP Infant Feeding Surveillance Pilot Study: Final Report and Recommendations’ for sample size calculations.⁶
- Exclude participants who could not be reached to complete the questionnaire.⁶
- Relevant questions for analysis under each pathway are listed in Table 2.

Table A.2 Relevant questions for any breastfeeding indicator, pathways based on responses to Question 7

1. Breastmilk	2. Combination of breastmilk and formula	3. Formula
Q7: In the past week, what have you fed your baby? By this, we mean what milk?	Q7: In the past week, what have you fed your baby? By this, we mean what milk?	Q7: In the past week, what have you fed your baby? By this, we mean what milk?
		Q9: Since birth, have you attempted to breastfeed or provide breastmilk to your baby, even if only once?
		Q10: How old was your baby in months when you stopped breastfeeding?



Figure A.2 Flowchart for any breastfeeding indicator calculation



Note: Only questions and response options relevant to this indicator are depicted. TIME may be equal to or less than the time point when the questionnaire was administered.

Indicator comments

- The Infant Feeding Surveillance 6MRQ Knowledge Translation Project team recommends that stratified analyses be conducted at the discretion of the individual PHUs. Pre-defined indicators for sub-populations are not provided.
- It cannot be definitively determined if breastfeeding was initiated immediately after birth, or if there were periods when breastfeeding ceased temporarily. If the infant was only fed breastmilk in the past week, it must be assumed that they had also only been fed breastmilk at prior time points (e.g., 2, 4 or 6 months), unless responses indicate otherwise.
- For a variety of reasons, not every baby may have a 6MRQ completed. Therefore, the indicator ‘entry to service’ cannot be calculated using data collected with the 6MRQ.

Ontario Public Health Standards (OPHS)

- The Ontario Public Health Standards (OPHS) establish requirements for the fundamental public health programs and services carried out by boards of health, which include assessment and surveillance, health promotion and policy development, disease and injury prevention, and health protection. The OPHS consist of one Foundational Standard and 13 Program Standards that articulate broad societal goals that result from the activities undertaken by boards of health and many others, including community partners, non-governmental organizations, and governmental bodies. These results have been expressed in terms of two levels of outcomes: societal outcomes and board of health outcomes. Societal outcomes entail changes in health status, organizations, systems, norms, policies, environments, and practices and result from the work of many sectors of society, including boards of health, for the improvement of the overall health of the population. Board of health outcomes are the results of endeavours by boards of health and often focus on changes in awareness, knowledge, attitudes, skills, practices, environments, and policies. Boards of health are accountable for these outcomes. The standards also outline the requirements that boards of health must implement to achieve the stated results.

Assessment and/or surveillance requirements related to this indicator

- The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the Population Health Assessment and Surveillance Protocol, 2008 (or as current) in the areas of breastfeeding (see Child Health Standard Requirement #1).
- The board of health shall report on the Health Promotion Indicator 16: Baby-Friendly Initiative (BFI) Status.
<http://www.ontario.ca/publichealthstandards>

Cross-references to other indicators

- Canadian Community Health Survey. Maternal experiences – Breastfeeding (MEX) Module, and the derived variables MEXDEBF2 and MEXFEB6.

Cited references

1. Breastfeeding Committee for Canada (BCC). (2012, December 31). Breastfeeding definitions and data collection periods. Retrieved April 5, 2017 from:
http://breastfeedingcanada.ca/documents/BCC_BFI_Breastfeeding_Definitions_and_Data_Collection_English.pdf.
2. M. Green, personal communication, May 18, 2016.
3. M. LaSalle, personal communication, Mar 22, 2017.

4. te Nyenhuis E., Deming J., Dupuis S., et al. Data Dictionary for the 6-Month Retrospective Time Point Questionnaire (Version 2.2 Release: 05 April 2017). Appendix E of Infant Feeding Surveillance Knowledge Translation Project: Final Report and Analytic Guidance Documentation for the 6-Month Retrospective Single Time Point Questionnaire.
5. Breastfeeding Committee for Canada (BCC). (2012, May). BFI integrated 10 steps practice outcome indicators for hospitals and community health services. Retrieved April 5, 2017 from www.breastfeedingcanada.ca/documents/2012-05-14_BCC_BFI_Ten_Steps_Integrated_Indicators.pdf
6. Haile R., Procter TD., Alton GD. et al. on behalf of LDCP Breastfeeding Surveillance Project Team. (2015). Infant Feeding Surveillance Pilot Study: Final Report and Recommendations. Woodstock, Ontario, Canada. Retrieved April 5, 2017 from: www.publichealthontario.ca/en/ServicesAndTools/Documents/LDCP/LDCP_Breastfeeding_Project_Final_Report_2015.pdf

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Changes made

Date	Type of review- Formal review or ad-hoc process	Changes made by	Description of changes



Exclusive Breastfeeding Core Indicator

Description

- The proportion of babies, as of <TIME>, who were receiving human milk (including expressed milk, donor milk) and had not received formula or ‘other liquids’¹, and had not been introduced to solid foods.
 - <TIME> may be equal to or less than any time point after the questionnaire is administered. A time point of 5.5 months may be used to evaluate breastfeeding rates ‘at about’ 6 months for BFI purposes.^{2,3} Common time points for reporting to the BCC include breastfeeding at 2 weeks, 2 months, 4 months, and 6 months postpartum.
- The number of exclusively breastfed infants is the sum of:
 - current exclusive breastfeeding infants;
 - current formula feeding, if previous exclusive breastfeeding duration was greater than the time-point of interest; and
 - current combination feeding, if previous exclusive breastfeeding duration was greater than the time-point of interest.

Indicator and method of calculation

Specific indicator

- Exclusive breastfeeding as of <TIME>.

Exclusive breastfeeding

Total number of babies, as of <TIME>, who were receiving human milk (including expressed milk, donor milk) and had not received formula or ‘other liquids’¹, and had not been introduced to solid foods

* 100

Total number of babies for whom the survey was completed

Data notes

1. ‘Other liquids’ does not include oral rehydration solution (ORS), vitamins, medicines or minerals.⁴
2. Refer to the derived variable dEligible in the 6MRQ data dictionary for inclusion criteria.⁵
3. To evaluate breastfeeding rates at about 6 months, a time point of 5.5 months may be used.^{2,3}
4. Solids can be introduced at 5.5 months or later.^{2,3}

Mandatory reporting requirement

- For Baby-Friendly Initiative (BFI) designation for community health services, surveillance requirements include recording data on entry to service and a

minimum of two additional time frames (e.g., 2 or 4 months) and up to 6 months ('at about' 6 months¹⁻³).

Indicator objectives

- To demonstrate the proportion of babies within the community health services in the past year who were exclusively breastfeeding.
- To demonstrate the duration of exclusive breastfeeding at the community health services level.

Data sources

- **Numerator & denominator:** Locally Driven Collaborative Project (LDCP) Retrospective 6-Month Single Time Point Questionnaire (6MRQ).⁷
- **Suggested citations:** <Public Health Unit>, infant feeding surveillance data, collected using the LDCP 6MRQ.
- **Core indicator documentation distributed by:** The Infant Feeding Surveillance 6MRQ Knowledge Translation Project team.

Analysis checklist

- There are three pathways branching from Question 7 that are relevant to the analysis of this indicator. Question 7 asks what [milk] has baby been fed in the past week. There are three possible response options (i.e., breastmilk, combination of breastmilk and formula, and formula) and each option creates a different analysis pathway for this indicator. Refer to Figures 3, 4, and 5, respectively, for a visual illustration of these pathways.
- Relevant questions for analysis under each pathway are listed in Table 3.

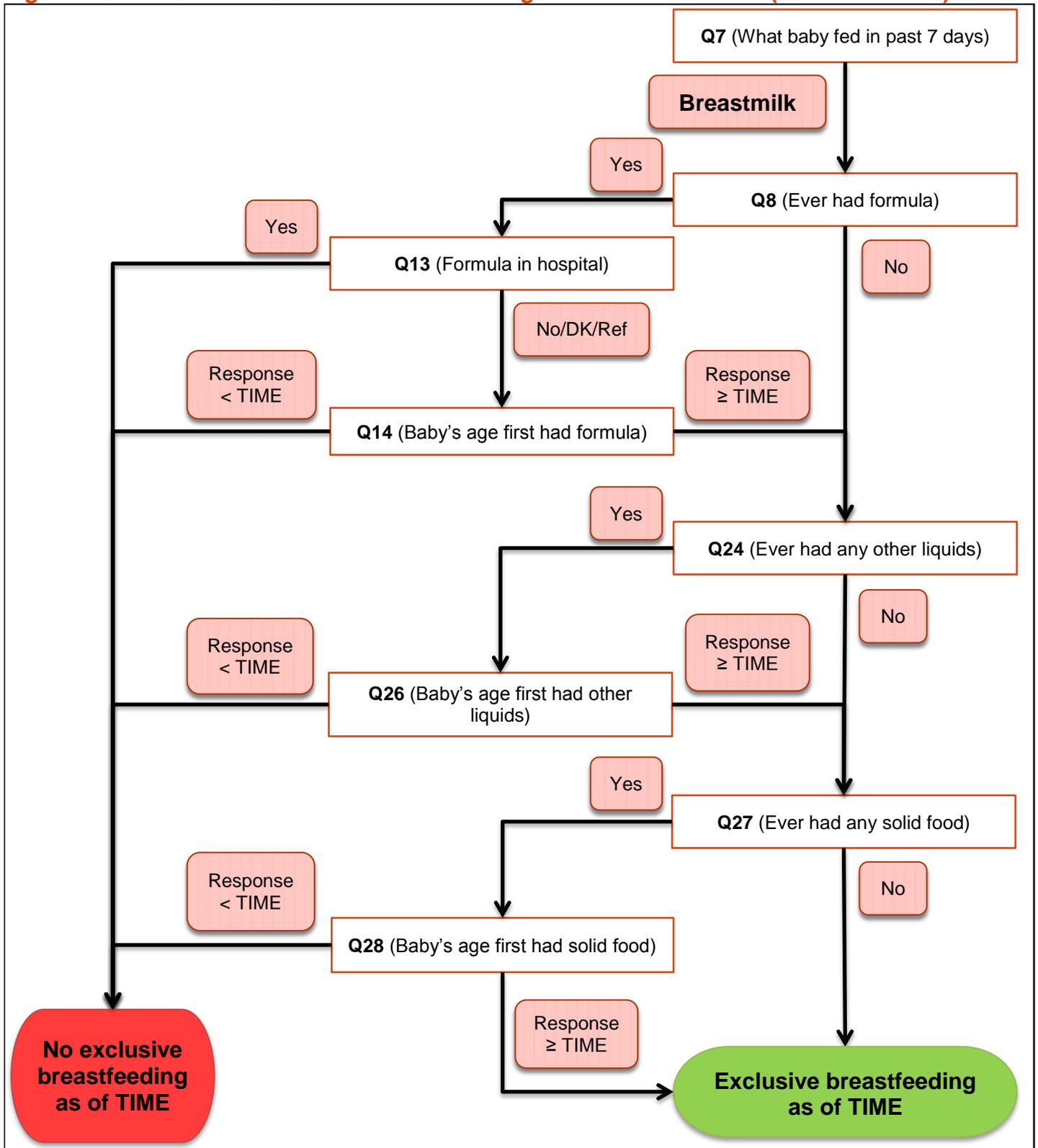
Notes

- There are no recommended data suppression guidelines; analysts are advised to adhere to any relevant public health unit policy or legislation.
- Data collection methodology may vary by public health unit, including online or telephone data collection.
- Refer to the 6MRQ data dictionary for coding variables.⁵
- Refer to 'LDCP Infant Feeding Surveillance Pilot Study: Final Report and Recommendations' for sample size calculations.⁷
- Exclude participants who could not be reached to complete the questionnaire.⁷

Table A.3 Relevant questions for exclusive breastfeeding indicator, pathways based on responses to Question 7

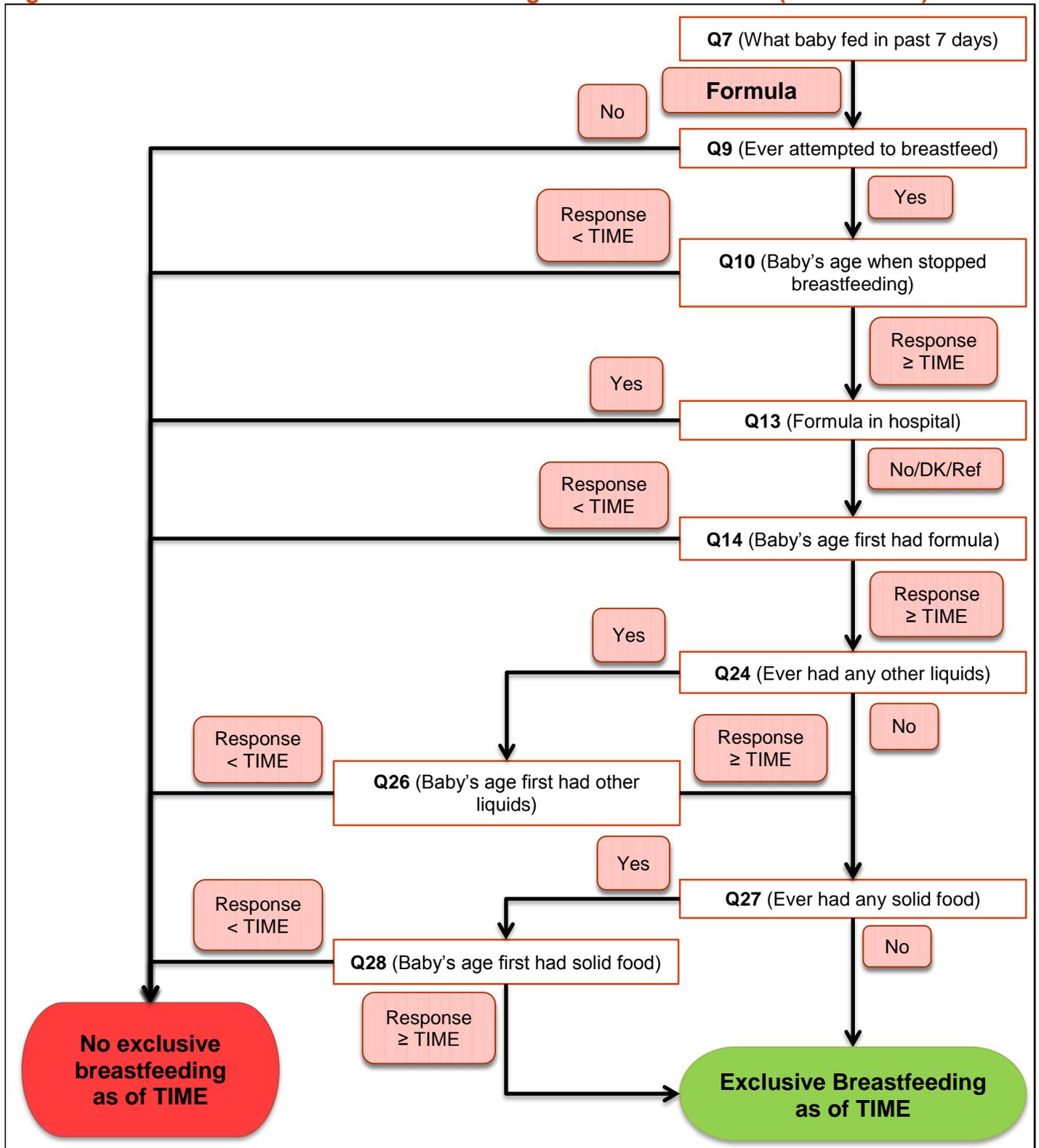
1. Breastmilk	2. Combination of breastmilk and formula	3. Formula
Q7: In the past week, what have you fed your baby? By this, we mean what milk?	Q7: In the past week, what have you fed your baby? By this, we mean what milk?	Q7: In the past week, what have you fed your baby? By this, we mean what milk?
Q8: Since birth, including any time spent in hospital, has your baby ever been given any formula?	---	---
---	---	Q9: Since birth, have you attempted to breastfeed or provide breastmilk to your baby, even if only once?
---	---	Q10: How old was your baby in months when you stopped breastfeeding?
Q13: Was your baby given formula in hospital?	Q13: Was your baby given formula in hospital?	Q13: Was your baby given formula in hospital?
Q14: How old was your baby in months when they were first given formula?	Q14: How old was your baby in months when they were first given formula?	Q14: How old was your baby in months when they were first given formula?
Q24: Since birth, has your baby ever been given any liquids other than breastmilk or formula such as water, sugar water or juice?	Q24: Since birth, has your baby ever been given any liquids other than breastmilk or formula such as water, sugar water or juice?	Q24: Since birth, has your baby ever been given any liquids other than breastmilk or formula such as water, sugar water or juice?
Q26: How old was your baby in months the first time they were given liquids other than breastmilk or formula?	Q26: How old was your baby in months the first time they were given liquids other than breastmilk or formula?	Q26: How old was your baby in months the first time they were given liquids other than breastmilk or formula?
Q27: Since birth, has your baby ever been given any solid food such as meat, chicken, cereal, vegetables, or fruit?	Q27: Since birth, has your baby ever been given any solid food such as meat, chicken, cereal, vegetables, or fruit?	Q27: Since birth, has your baby ever been given any solid food such as meat, chicken, cereal, vegetables, or fruit?
Q28: How old was your baby in months the first time they were given any solid food such as such as meat, chicken, cereal, vegetables, or fruit?	Q28: How old was your baby in months the first time they were given any solid food such as such as meat, chicken, cereal, vegetables, or fruit?	Q28: How old was your baby in months the first time they were given any solid food such as meat, chicken, cereal, vegetables, or fruit?

Figure A.3 Flowchart for exclusive breastfeeding indicator calculation (Q7= breastmilk)



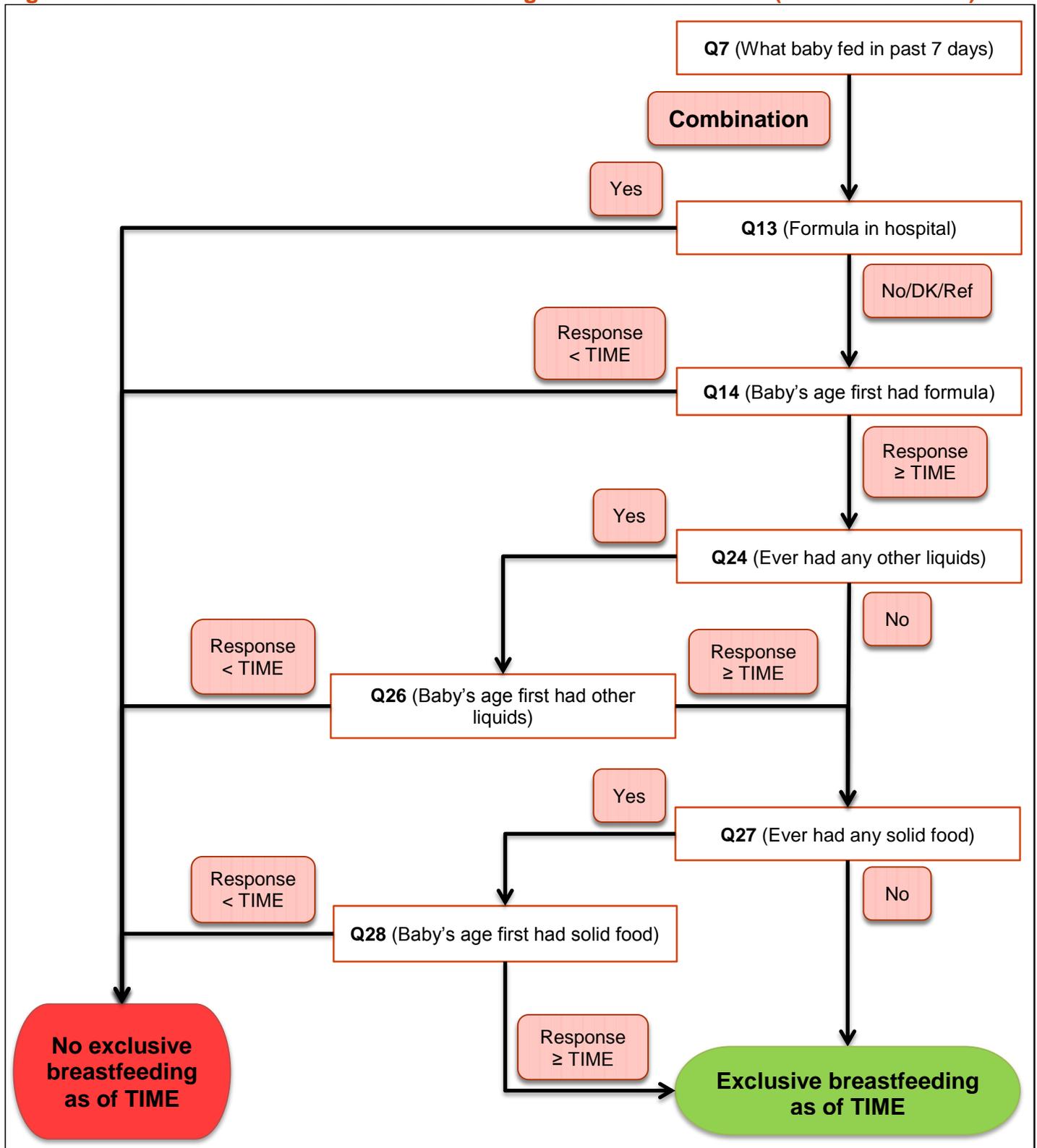
Note: Only questions and response options relevant to this indicator are depicted. TIME may be equal to or less than the time point when the questionnaire was administered.

Figure A.4 Flowchart for exclusive breastfeeding indicator calculation (Q7= formula)



Note: Only questions and response options relevant to this indicator are depicted. TIME may be equal to or less than the time point when the questionnaire was administered.

Figure A.5 Flowchart for exclusive breastfeeding indicator calculation (Q7= combination)



Note: Only questions and response options relevant to this indicator are depicted. TIME may be equal to or less than the time point when the questionnaire was administered.

Indicator comments

- The Infant Feeding Surveillance 6MRQ Knowledge Translation Project team recommends that stratified analyses be conducted at the discretion of the individual PHUs. Pre-defined indicators for sub-populations are not provided.
- For the babies that were exclusively breastfed in the past week (Q7=1), it cannot be definitively determined if breastfeeding was initiated immediately after birth, or if there were periods when breastfeeding ceased temporarily. If a baby was only fed any breastmilk in the past week, it must be assumed that they had also been fed breastmilk at prior time points (e.g., 2, 4 or 6 months), unless responses indicate otherwise.
- For a variety of reasons, not every baby may have a 6MRQ completed. Therefore, the indicator 'entry to service' cannot be calculated using the 6MRQ.

Ontario Public Health Standards (OPHS)

- The Ontario Public Health Standards (OPHS) establish requirements for the fundamental public health programs and services carried out by boards of health, which include assessment and surveillance, health promotion and policy development, disease and injury prevention, and health protection. The OPHS consist of one Foundational Standard and 13 Program Standards that articulate broad societal goals that result from the activities undertaken by boards of health and many others, including community partners, non-governmental organizations, and governmental bodies. These results have been expressed in terms of two levels of outcomes: societal outcomes and board of health outcomes. Societal outcomes entail changes in health status, organizations, systems, norms, policies, environments, and practices and result from the work of many sectors of society, including boards of health, for the improvement of the overall health of the population. Board of health outcomes are the results of endeavours by boards of health and often focus on changes in awareness, knowledge, attitudes, skills, practices, environments, and policies. Boards of health are accountable for these outcomes. The standards also outline the requirements that boards of health must implement to achieve the stated results.

Assessment and/or surveillance requirements related to this indicator

- The board of health shall conduct epidemiological analysis of surveillance data, including monitoring of trends over time, emerging trends, and priority populations, in accordance with the Population Health Assessment and Surveillance Protocol, 2008 (or as current) in the areas of breastfeeding (see Child Health Standard Requirement #1).
- The board of health shall report on the Health Promotion Indicator 16: Baby-Friendly Initiative (BFI) Status.

<http://www.ontario.ca/publichealthstandards>

Definitions

- Exclusive breastfeeding: No other food or drink, not even water, except breast milk (including expressed milk, donor milk) but allows the infant to receive oral rehydration solution, drops and syrups (vitamins, minerals and medicines).⁵

Cross-references to other indicators

- Canadian Community Health Survey. Maternal experiences – Breastfeeding (MEX) Module, and the derived variables MEXDEBF2 and MEXFEB6.

Cited references

1. Breastfeeding Committee for Canada (BCC). (2012, December 31). Breastfeeding definitions and data collection periods. Retrieved April 5, 2017 from:
http://breastfeedingcanada.ca/documents/BCC_BFI_Breastfeeding_Definitions_and_Data_Collection_English.pdf.
2. M. Green, personal communication, May 18, 2016.
3. M. LaSalle, personal communication, Mar 22, 2017.
4. The World Health Organization (WHO). (2016). The World Health Organization's infant feeding recommendation. Retrieved April 10, 2017, from
http://www.who.int/nutrition/topics/infantfeeding_recommendation/en/.
5. Nyenhuis E., Deming J., Dupuis S., et al. Data Dictionary for the 6-Month Retrospective Time Point Questionnaire (Version 2.2 Release: 05 April 2017). Appendix E of Infant Feeding Surveillance Knowledge Translation Project: Final Report and Analytic Guidance Documentation for the 6-Month Retrospective Single Time Point Questionnaire.
6. Breastfeeding Committee for Canada (BCC). (2012, May). BFI integrated 10 steps practice outcome indicators for hospitals and community health services. Retrieved April 5, 2017 from www.breastfeedingcanada.ca/documents/2012-05-14_BCC_BFI_Ten_Steps_Integrated_Indicators.pdf
7. Haile R., Procter TD., Alton GD. et al. on behalf of LDPC Breastfeeding Surveillance Project Team. (2015). Infant Feeding Surveillance Pilot Study: Final Report and Recommendations. Woodstock, Ontario, Canada. Retrieved April 5, 2017 from:
www.publichealthontario.ca/en/ServicesAndTools/Documents/LDCP/LDCP_Breastfeeding_Project_Final_Report_2015.pdf

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Changes made

Date	Type of review- Formal review or ad- hoc process	Changes made by	Description of changes



Adapting the Core Indicators for Use with the Revised Retrospective 6-Month Single Time Point Questionnaire

Changes relevant to all three core indicators

There was one change made in the revised Retrospective 6-Month Single Time Point Questionnaire (6MRQ) that must be noted for all three core indicators. In the revised 6MRQ there is an additional response option for Question 7, “No breastmilk nor formula”.

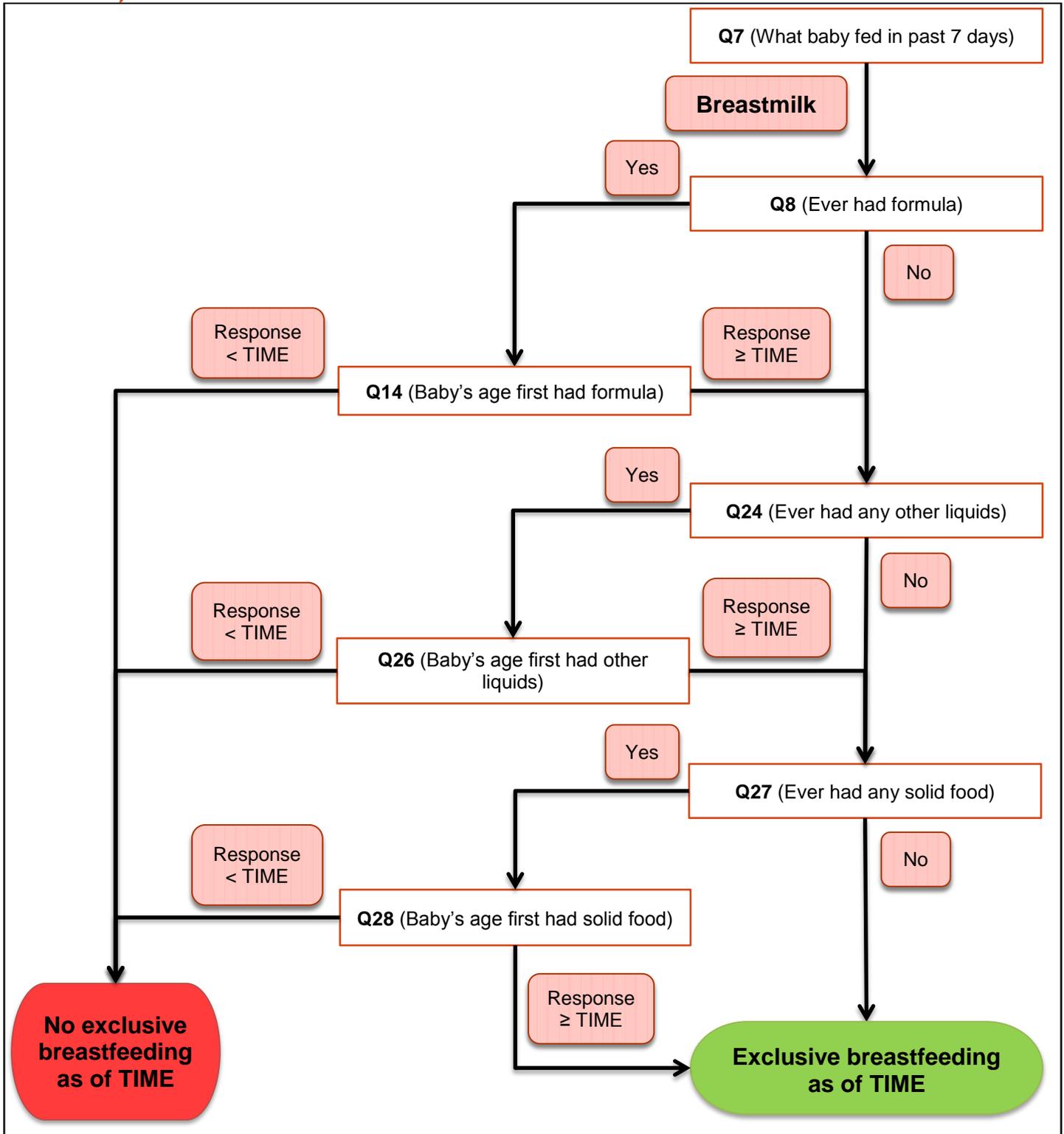
For the purposes of all three breastfeeding indicator calculations, these responses will be treated as non-response and excluded from the numerator and denominator.

Changes relevant to the exclusive breastfeeding core indicator

There was one change made in the revised 6MRQ that affects the exclusive breastfeeding core indicator. In the revised 6MRQ, all respondents are asked Question 14 (How old was your baby in months when they were first given formula?), now including those who responded “Yes” to Question 13 (Was your baby given formula in hospital?).

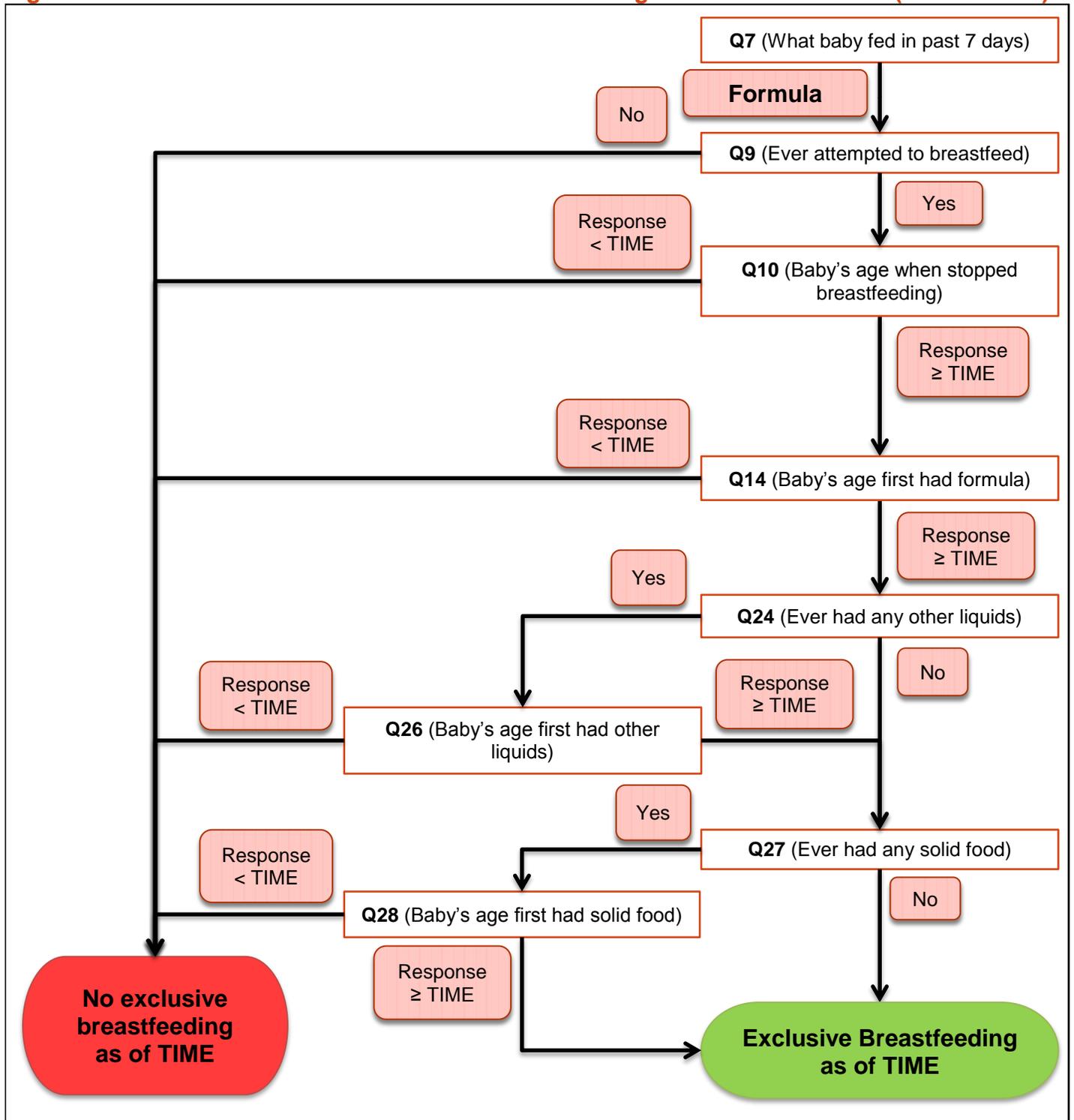
With this change in the questionnaire skip pattern, Q13 becomes irrelevant to the calculation of the exclusive breastfeeding indicator, and as such, should be removed from Table 3 as well as from Figures 3, 4 and 5. The table would require no other revisions than the removal of the Q13 row. The revised flowcharts are provided below (Figures 6,7 and 8 respectively).

Figure A.6 Revised flowchart for exclusive breastfeeding indicator calculation (Q7=breastmilk)



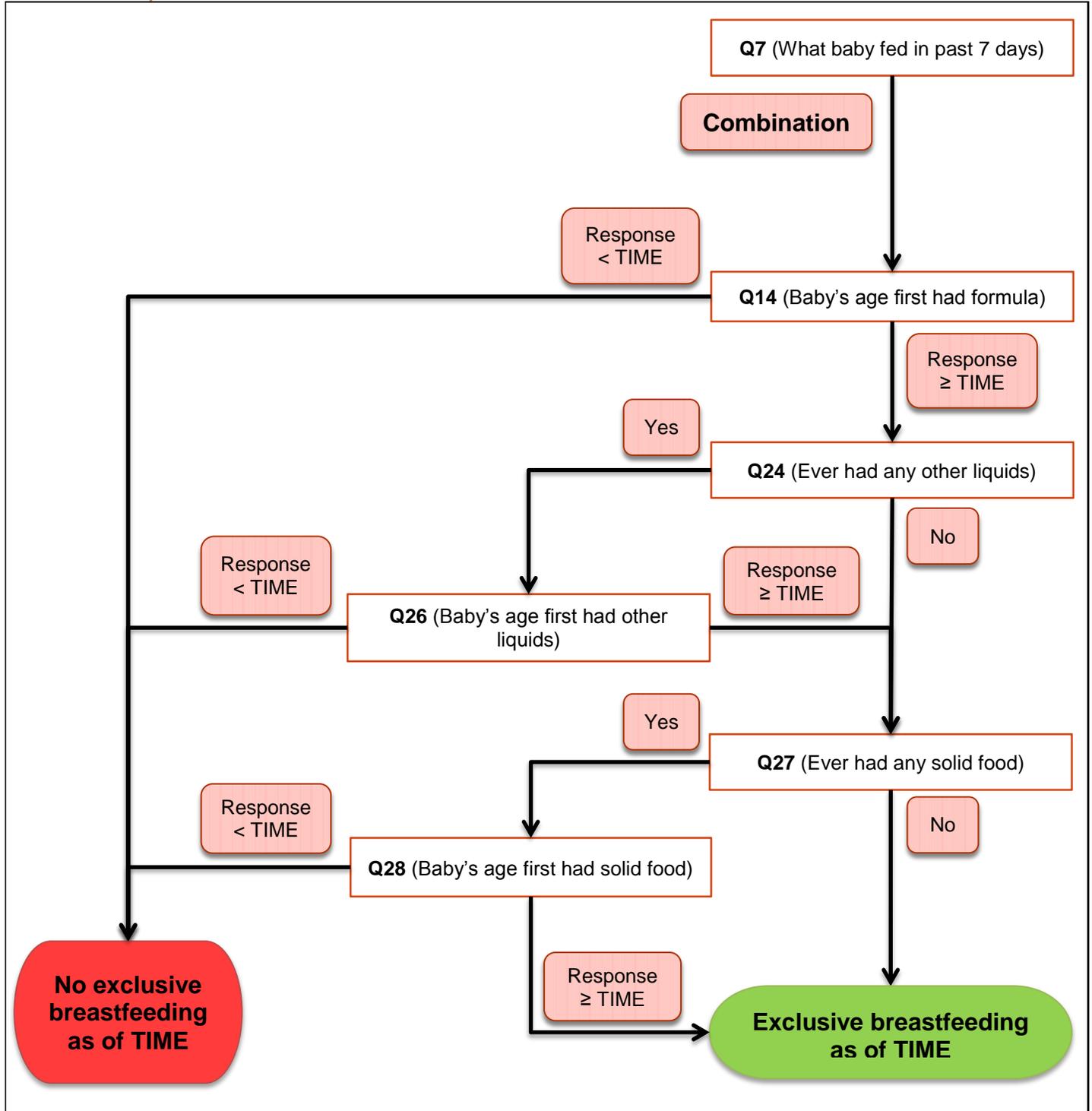
Note: Only questions and response options relevant to this indicator are depicted. TIME may be equal to or less than the time point when the questionnaire was administered.

Figure A.7 Revised flowchart for exclusive breastfeeding indicator calculation (Q7= formula)



Note: Only questions and response options relevant to this indicator are depicted. TIME may be equal to or less than the time point when the questionnaire was administered.

Figure A.8 Revised flowchart for exclusive breastfeeding indicator calculation (Q7= combination)



Note: Only questions and response options relevant to this indicator are depicted. TIME may be equal to or less than the time point when the questionnaire was administered.

Appendix B – Revised Retrospective 6-Month Single Time Point Questionnaire (English Only; Final Version)

Revised Retrospective 6-Month Single Time Point Questionnaire (6 months to a day before 7 months of age)

Introduction and consent

Hello, my name is _____ and I'm calling from _____ (Health Unit). We are conducting a survey about infant feeding to help improve services for mothers and babies in your area. When you first had your baby, you agreed to share some information about yourself and your baby with us. We are calling to ask if you would be willing to answer some questions about how you have been feeding your baby and some questions about you. If you agree to participate, you can choose to end the survey at any time and you can also choose to skip any question that you do not want to answer. Please be assured that refusal of any kind at any stage will not affect the care or services you will receive. Any answers you provide will be protected and your name will never be used in reports about the results of this survey.

#	Question	Response Options	Go To
1	Do you wish to participate in this survey?	Yes	3
		Yes, but now is not a good time	2
		No	46
2	May we call you back at a later time to conduct the survey?	Yes (record)	46
		No	

Eligibility

Before getting to the survey, I need to ask a few brief questions to be sure you qualify.

#	Question	Response Options	Go To
3	Is your baby currently living with you?	Yes	4
		No	46
4	Are you currently living in _____ Region?	Yes	5
		No	46

Section 1: Questions for all mothers

#	Question	Response Options	Go To
5	a) Can you confirm that your baby was born on _____ (read birthdate)?	Yes (if same as ISCIS)	6
		No (if different than ISCIS)	5b
	b) What is your baby's birthdate?	(record birthdate)	6

#	Question	Response Options	Go To
6	On this date, did you give birth to one baby or multiple babies?	Single	7
		Multiples	
7	In the past week, what have you fed your baby? By this, we mean what milk? (Interviewer note: read descriptions if needed- see below)	Breastmilk	8
		Formula	9
		Combination of breastmilk and formula	13
		Other (no breastmilk nor formula)	9

Interviewer may read or consider the following definitions for clarification:

Breastmilk: Baby is breastfeeding or receiving expressed breastmilk but NOT currently receiving any infant formula.

Combination of breastmilk and formula: Baby is breastfeeding or receiving expressed breastmilk AND is currently receiving infant formula.

Formula: Baby is receiving infant formula but NOT currently breastfeeding or receiving expressed breastmilk.

Other: Baby is receiving food other than breastmilk or formula.

Section 2: Questions for mothers who are only feeding with breastmilk

#	Question	Response Options	Go To
8	Since birth, including any time spent in hospital, has your baby ever been given any formula?	Yes	13
		No	18
		Don't know/can't recall	
		Refused	

Section 3: Questions about providing breastmilk

#	Question	Response Options	Go To
9	Since birth, have you attempted to breastfeed or provide breastmilk to your baby, even if only once?	Yes	10
		No	12
		Don't know/can't recall	13
		Refused	



#	Question	Response Options	Go To
10	How old was your baby in months when you stopped breastfeeding? (do not read options)	Less than 0.5 months	11
		0.5 months to less than 1 month	
		1 month to less than 1.5 months	
		1.5 months to less than 2 months	
		2 months to less than 2.5 months	
		2.5 months to less than 3 months	
		3 months to less than 3.5 months	
		3.5 months to less than 4 months	
		4 months to less than 4.5 months	
		4.5 months to less than 5 months	
		5 months to less than 5.5 months	
		5.5 months to less than 6 months	
		6 months to less than 6.5 months	
		6.5 months to less than 7 months	
Don't know/can't recall			
Refused			
11	What were the reasons you stopped breastfeeding or giving breastmilk? (do not read options) [formatted for multiple response]	Baby Reasons:	13
		Baby unable to latch/not breastfeeding well/tongue tied	
		Classic galactosemia, maple syrup urine disease, PKU	
		Baby hungry, fussy, colicky	
		Baby not gaining weight well	
		Jaundice	
		Low blood sugar	
		Other health issues <text box>	
		Maternal Reasons:	
		Problems with expressing or delivering breastmilk (including pumping and lactation aids)	
		Not enough milk	
		Health reasons (surgery, medication, ill)	
		Pain (sore nipples/breasts, biting)	
		Maternal lifestyle (smoking, diet, alcohol)	
		Previous experience	
		Other reasons:	
		Convenience	
		Separation	
		Encouraged by family/friend/partner	
Advice of a health care professional			
Other <text box>			
Don't know/can't recall			
Refused			

#	Question	Response Options	Go To
12	What were the reasons why you did not breastfeed or give breastmilk to your baby? (do not read options) [formatted for multiple response]	Baby Reasons:	13
		Classic galactosemia, maple syrup urine disease, PKU	
		Other health issues <text box>	
		Maternal Reasons:	
		Health reasons (surgery, medication, ill)	
		Maternal lifestyle (smoking, diet, alcohol)	
		Previous experience	
		Other Reasons:	
		Convenience	
		Separation	
		Encouraged by family/friend/partner	
		Advice of a health care professional	
		Other <text box>	
		Don't know/can't recall	
Refused			

Section 4: Questions about providing formula

#	Question	Response Options	Go To
13	Was your baby given formula in hospital?	Yes	14
		No	
		Don't know/can't recall	
		Refused	
14	How old was your baby in months when they were first given formula?	Less than 0.5 months	15
		0.5 months to less than 1 month	
		1 month to less than 1.5 months	
		1.5 months to less than 2 months	
		2 months to less than 2.5 months	
		2.5 months to less than 3 months	
		3 months to less than 3.5 months	
		3.5 months to less than 4 months	
		4 months to less than 4.5 months	
		4.5 months to less than 5 months	
		5 months to less than 5.5 months	
		5.5 months to less than 6 months	
		6 months to less than 6.5 months	
		6.5 months to less than 7 months	
Don't know/can't recall			
Refused			



Section 5: Questions about recommending formula use

#	Question	Response Options	Go To
15	Did a health care professional recommend that you give your baby formula?	Yes	16
		No	
		Don't know/can't recall	17
		Refused	
16	What health care professional recommended that you give your baby formula? (do not read options) [formatted for multiple response]	Hospital:	17
		Doctor (including obstetrician)	
		Nurse	
		Lactation consultant	
		Community:	
		Midwife	
		Doctor	
		Lactation consultant	
		Nurse practitioner	
		Public health nurse	
		Other:	
		Other <text box>	
		Don't know/can't recall	
Refused			
17	What were the reasons your baby was first given formula? (do not read options) [formatted for multiple response]	Baby Reasons:	If q7= breast milk or combo, go to q18. If q7= formula, go to q22.
		Baby unable to latch/not breastfeeding well/tongue tied	
		Classic galactosemia, maple syrup urine disease, PKU	
		Baby hungry, fussy, colicky	
		Baby not gaining weight well	
		Jaundice	
		Low blood sugar	
		Other health issues <text box>	
		Maternal Reasons:	
		Not enough milk	
		Health reasons (surgery, medication, ill)	
		Pain (sore nipples/breasts, biting)	
		Maternal lifestyle (smoking, diet, alcohol)	
		Previous experience	
		Other reasons:	
		Convenience	
		Separation	
Encouraged by family/friend/partner			
Advice of a health care professional			
Other <text box>			
Don't know/can't recall			

		Refused	
--	--	---------	--

Section 6: Questions for mothers still providing breastmilk

#	Question	Response Options	Go To
18	Is returning to work or school a factor in how long you plan to breastfeed or give breastmilk?	Yes	19
		No	
		Don't know/can't recall	
		Refused	
19	How old will your child be in months when you plan to stop breastfeeding or giving breastmilk?	6 months to less than 6.5 months	20
		6.5 months to less than 7 months	
		7 months to less than 7.5 months	
		7.5 months to less than 8 months	
		8 months to less than 8.5 months	
		8.5 months to less than 9 months	
		9 months to less than 9.5 months	
		9.5 months to less than 10 months	
		10 months to less than 10.5 months	
		10.5 months to less than 11 months	
		11 months to less than 11.5 months	
		11.5 months to less than 12 months	
		12 months to less than 15 months	
		15 months to less than 18 months	
		18 months to less than 21 months	
21 months to less than 24 months			
	2 years or more		
	Until baby weans		
	No plans/don't know		
	Other <text box>		
	Refused		
20	Have you had any difficulties or concerns with feeding your baby?	Yes	21
		No	22
		Don't know/can't recall	
		Refused	



#	Question	Response Options	Go To
21	What difficulties or concerns have you had with feeding your baby? (do not read options) [formatted for multiple response]	Baby Reasons: Baby unable to latch/not breastfeeding well/tongue tied Baby hungry, fussy, colicky Baby not gaining weight well Low blood sugar Other health issues <text box> Maternal Reasons: Problems with expressing or delivering breastmilk (including pumping and lactation aids) Not enough milk Health reasons (surgery, medication, ill) Pain (sore nipples/breasts, biting) Maternal lifestyle (smoking, diet, alcohol) Other reasons: Separation Other <text box> Don't know/can't recall Refused	22

Section 7: Questions about services used

#	Question	Response Options	Go To
22	Did you use any programs or services to help you with feeding your baby?	Yes No Don't know/can't recall Refused	23 24
23	Which services/programs have helped you with feeding your baby? [formatted for multiple response] Each health unit can add or remove from the list, based on current programming; the ones listed are suggestions and can be changed at any point.	Public Health Programs: Public health breastfeeding clinic HBHC program Other <text box> Non-Public Health Programs: 24-hour breastfeeding line La Leche League Telehealth Private lactation consultant Hospital breastfeeding clinic Other: Other <text box> Don't know/can't recall Refused	24

Section 8: Questions about the introduction to liquids other than breastmilk or formula and solids

#	Question	Response Options	Go To
24	Since birth, has your baby ever been given any liquids other than breastmilk or formula, such as water, sugar water or juice? Other liquids do not include vitamins or medications. (Interviewer note: If only vitamin drops or medications have been given to your baby, answer 'no' to this question.)	Yes	25
		No	27
		Don't know/can't recall	
		Refused	
25	What liquids other than breastmilk or formula has your baby been given? (do not read options) [formatted for multiple responses]	Water	26
		Sugar water	
		Juice	
		Cow's milk	
		Plant-based milk (almond, soy, rice, etc.)	
		Tea	
		Other <text box>	
		Don't know/can't recall	
		Refused	
26	How old was your baby in months the first time they were given liquids other than breastmilk or formula? (do not read options)	Less than 0.5 months	27
		0.5 months to less than 1 month	
		1 month to less than 1.5 months	
		1.5 months to less than 2 months	
		2 months to less than 2.5 months	
		2.5 months to less than 3 months	
		3 months to less than 3.5 months	
		3.5 months to less than 4 months	
		4 months to less than 4.5 months	
		4.5 months to less than 5 months	
		5 months to less than 5.5 months	
		5.5 months to less than 6 months	
		6 months to less than 6.5 months	
		6.5 months to less than 7 months	
Don't know/can't recall			
Refused			
27	Since birth, has your baby ever been given any solid food such as meat, chicken, cereal, vegetables, or fruit?	Yes	28
		No	32
		Don't know/can't recall	33
		Refused	



#	Question	Response Options	Go To
28	How old was your baby in months the first time they were given any solid food, such as meat, chicken, cereal, vegetables, or fruit? (do not read options)	Less than 0.5 months	29
		0.5 months to less than 1 month	
		1 month to less than 1.5 months	
		1.5 months to less than 2 months	
		2 months to less than 2.5 months	
		2.5 months to less than 3 months	
		3 months to less than 3.5 months	
		3.5 months to less than 4 months	
		4 months to less than 4.5 months	
		4.5 months to less than 5 months	
		5 months to less than 5.5 months	
		5.5 months to less than 6 months	
		6 months to less than 6.5 months	
		6.5 months to less than 7 months	
29	When you introduced solid foods at that time, was it because a health care provider recommended it?	Yes	30
		No	
		Don't know/can't recall	
		Refused	
30	What were the reasons your baby was first given solids?	Baby Reasons:	31
		Baby will gain more weight	
		Baby had teeth	
		Baby wanted solids	
		To sleep better	
		Reflux	
		To avoid allergies	
		Other Reasons:	
		Felt like he/she was ready	
		Previous experience	
		Other <text box>	
		Don't know/can't recall	
31	Had your baby had any iron-containing foods like meat, iron-fortified infant cereal, tofu, or lentils?	Yes	33
		No	
		Don't know/can't recall	
		Refused	



#	Question	Response Options	Go To
32	How old will your baby be in months when you intend to introduce solid foods? (do not read options)	6 months to less than 6.5 months	33
		6.5 months to less than 7 months	
		7 months to less than 7.5 months	
		7.5 months to less than 8 months	
		8 months to less than 8.5 months	
		8.5 months to less than 9 months	
		9 months to less than 9.5 months	
		9.5 months to less than 10 months	
		10 months to less than 10.5 months	
		10.5 months to less than 11 months	
		11 months to less than 11.5 months	
		11.5 months to less than 12 months	
		1 year or older	
		When baby gets teeth	
No plans/don't know			
Refused			

Section 9: Questions for all mothers (maternal history and demographics)

#	Question	Response Options	Go To
33	What is your date of birth (only ask if blank)	<text box>	34
		Refused	
34	Is this your first baby? (or babies in the event of multiples)	Yes	38
		No	35
		Refused	38
35	Prior to this baby (or these babies in the event of multiples), have you breastfed or tried to breastfeed before?	Yes	36
		No	
		Don't know/can't recall	
		Refused	
36	In the past 5 years, have you participated in a prenatal class that included information about breastfeeding? (Interviewer note: this includes in-person or online)	Yes	37
		No	38
		Don't know/can't recall	
		Refused	
37	Was this prenatal class provided through your local health unit?	Yes	38
		No	
		Don't know/can't recall	
		Refused	
38	What is your marital status?	Married/common-law	39
		Divorced/separated	
		Single	
		Widowed	
		Other	
Refused			

39	What is your highest level of education?	Some high school or less	40
		High school or equivalent	
		Some post-secondary	
		College/university	
		Refused	
40	What was your total family income before taxes last year?	Less than \$30,000	41
		\$30,000-\$59,999	
		\$60,000-\$89,999	
		\$90,000-\$119,999	
		\$120,000-\$149,999	
		\$150,000 or more	
		Don't know/can't recall	42
Refused			
41	How many people does this income support?	<text box>	42
42	Were you born in Canada?	Yes	44
		No	43
		Don't know/can't recall	44
		Refused	
43	What year did you arrive in Canada?	<text box>	44
		Don't know/can't recall	
		Refused	
44	How would you describe your racial or ethnic group? (do not read responses) [formatted for one option]	Asian-East (e.g. Chinese, Japanese, Korean)	45
		Asian-South (e.g. Indian, Pakistani, Sri Lankan)	
		Asian-South East (e.g. Malaysian, Filipino, Vietnamese)	
		Black-African (e.g. Ghanaian, Kenyan, Somali)	
		Black-North American (e.g. Canadian, American)	
		Black-Caribbean (e.g. Barbadian, Jamaican)	
		First Nations	
		Indian-Caribbean (e.g. Guyanese, with origins in India)	
		Indigenous/Aboriginal not included elsewhere	
		Inuit	
		Latin American (e.g. Argentinean, Chilean, Salvadorian)	
		Metis	
Middle Eastern (e.g. Egyptian, Iranian, Lebanese)			

		White-European (e.g. English, Italian, Russian)	
		White-North American (e.g. Canadian, American)	
		Mixed Heritage <text box>	
		Other <text box>	
		Refused	

Section 10: Follow-up consent

#	Question	Response Options	Go To
45	May we call you back when your baby is 12 months old to ask you questions?	Yes	46
		No (record so not contacted again)	

Section 11: Interview completion statement

#	Question	Response Options	Go To
46	Thank you for your time. Have a nice day.	END	47
47	INTERVIEWER: Did you make any referrals?	Yes	48
		No	Submit
48	List referrals	Provided health teaching <text box>	Submit
		Referred to health unit for health teaching/programs <text box>	
		Referred to external program <text box>	



Appendix C – Stata Syntax to Calculate Breastfeeding Indicators Required for Baby-Friendly Initiative (BFI) Designation with the Retrospective 6-Month Single Time Point Questionnaire

```

*****
*****
*** TASK: Calculate indicators for 6-mth retrospective infant feeding survey
*** AUTHOR: A.Harris, Epidemiologist, HKPR District Health Unit
*** DATE: Apr 13, 2017; Final Version 1.0
*** Data Dictionary: Version: 3.0; Released: 24 April 2017
*****
*****
*** The following syntax is a resource developed as part of the Locally ***
*** Driven Collaborative Project(LDCP) 6 Month Retrospective Questionnaire ***
*** Knowledge Exchange project funded by Public Health Ontario. This syntax ***
*** creates 7 standard breastfeeding indicators that may be used to report ***
*** local breastfeeding rates for surveillance and/or BFI accreditation ***
*** purposes.

*** This Stata syntax is to be used with infant feeding data collected using***
*** the LDCP 6-Month Retrospective Single Time Point Questionnaire (6MRQ), ***
*** a data collection tool developed by the LDCP Infant Feeding Surveillance***
*** Pilot Study Project team (April 2015). The 6MRQ can be accessed in the ***
*** project final report here:
***
https://www.publichealthontario.ca/en/ServicesAndTools/Documents/LDCP/LDCP\_Breastfeeding\_Project\_Final\_Report\_2015.pdf ***

*** Please note that the data dictionary and this syntax will not clean and ***
*** prepare your data for analysis. Each analyst/user is responsible for ***
*** the processing of their own raw dataset. Note that your dataset must be ***
*** formatted to the specifications in the standard LDCP 6MRQ Data ***
*** Dictionary, another resource developed as part of the LDCP 6MRQ ***
*** Knowledge Exchange project, in order for this syntax to run ***
*** successfully. ***

*** Note that each public health unit may have removed, added, or modified ***
*** questions from the 6MRQ; as such, the standard data dictionary may ***
*** serve as a starting point for use of the 6MRQ. The 6MRQ project group ***
*** recommends that any PHU-specific modifications use distinctly different ***
*** variable names and labels to distinguish them from the original 6MRQ ***
*** variables from the standard data dictionary. ***

*** For detailed explanation and definitions for the breastfeeding rate ***
*** indicators created below, see the Core Indicator documents also ***
*** developed by the LDCP 6MRQ Knowledge Exchange project. ***

*** Note that similar syntax was also developed in SAS. The SAS syntax ***
*** and Stata syntax were developed independently but have been tested and ***
*** produce similar results. ***

*** Caution is advised when adapting this syntax to meet your PHU infant ***
*** feeding analysis needs. It has been tested and peer-reviewed but ***

```

```

*** unfortunately, we cannot guarantee an error-free experience. Use and ***
*** adaptation of this syntax is done at your own risk. ***

*** Any feedback on this syntax is welcome and can be directed to ***
*** Andrew Harris (aharris@hkpr.on.ca) OR eha@regionofwaterloo.ca ***
*****
*****

*****
*** Please note that you may need to sort your data and or / remove records ***
*** based on your specific inclusion/exclusion criteria. ***
// Open your processed data file and create a counter.

    use "Infant Feeding Surveillance Survey.dta", clear /* Replace with the name of
your data file */
    egen id = seq()

// Remove non-eligible respondents. These include:
// i) those living outside of the PHU boundaries; and
// ii) those who are not currently living with the infant(s).
    drop if dEligible==0

// Question 7: Type of milk fed in the past week?
// Remove if question 7 was not answered.
    drop if missing(Q7)

*****
*****
// Create an 'ever-breastfed' variable. The percentage of babies who initiated
// breastfeeding is to be obtained from BORN, however not all babies will have
/// data collected though the survey. Therefore, the 'ever_bf' variable below
// is the initiate rate of those who responded to the survey.

// Any baby receiving milk or combination feeding (Q7)
// in the past week OR any baby whose mother attempted to breastfeed (Q9)
    gen ever_bf = 0
    replace ever_bf = 1 if inlist(Q7,1,3) | Q9==1
    tabulate ever_bf
*****
*****
// Question 10: Age of baby when stopped breastfeeding?
// Remove "don't know" & "refused" responses.
    drop if ((Q9==1) & inlist(Q10,88,99))

// Question 14: Age of baby when first given formula?
// Remove "don't know" & "refused" responses.
    drop if inlist(Q14,88,99)

// Question 24: Has the baby received any other liquids?
// Remove missing responses, "don't know", & "refused".
    drop if inlist(Q24,.,8,9)

// Question 26: Age when first given liquids other than milk/formula?
// Remove "don't know" & "refused" responses.
    drop if inlist(Q26,88,99)

```

```
// Question 27: Has the baby received given solid foods?
// Remove missing responses, "don't know", & "refused".
drop if inlist(Q27,.,8,9)

// Question 28: Age when first given solid foods?
// Remove "don't know" & "refused" responses.
drop if inlist(Q28,88,99)
*****
*****
// Run the frequencies of selected variable.
foreach var of varlist Q33_GRP Q35 Q36 Q37 Q38 Q39 Q40 Q41 Q42 Q44 {
  tabulate `var'
}
*****
*****
// The following section needs to be run at one time due to the use of the
// local macro. The macro is a placeholder for the time of interest.

// There are three possible pathways to calculate exclusive breastfeeding,
// which are due the feeding of i) breastmilk, ii) formula, or
// iii) combination of breastmilk and formula.

// The value held by the local `time' corresponds to the nth response option.
// To obtain rates a single time period, remove the forvalues loops and change
// the local `time' to the time period of interest. The macro can be changed
// to represent any of the 14 time periods before seven months
// (e.g., < 0.5 months, 1.5 months to < 2 months, etc.). There are two (2)
// -forvalue- loops in the file below.

quietly forvalues i = 1(1)14 {
  local time `i'
    /* 1 = Less than 0.5 (2 weeks)*/
    /* 2 = 0.5 (2 weeks) to less than 1 month*/
    /* 5 = 2.0 to less than 2.5 months*/
    /* 11 = 5.0 to less than 5.5 months*/

  capture drop exclusive_`time'
  capture drop any_`time'

  gen exclusive_`time' = 0
  sort id Q7 Q8 Q9 Q10 Q13 Q14 Q24 Q26 Q27 Q28
  order id Q7 Q8 Q9 Q10 Q13 Q14 Q24 Q26 Q27 Q28 exclusive_`time'
  *browse

*****
***PATH ONE; Past week breastmilk only***
*****
***NB: The BCC has indicated that 5.5 months (i.e., `at or about' 6-months) ***
*** is sufficient and acceptable initiation point for introduction of ***
*** solid foods, the introduction of other liquids, and the introduction ***
*** of formula. If your Health Unit uses a cut-off of 6-months for ***
*** liquids, but 5.5-months for solids, then replace Q28>=`time' is a ***
*** hard-code of Q28>=13 /*6 to less than 6.5 months*/.
```

```

/*EXCLUSIVE*/
// Providing breastmilk, never given formula,
// not given other liquids (or given other liquids after the time of interest)
// not given solid foods (or solid foods given after the time of interest)
replace exclusive_`time' = 1 if (Q7==1) & (Q8==0) & ///
    ((Q24==0) | (Q24==1 & Q26>=`time' & Q26<.) & ///
    ((Q27==0) | (Q27==1 & Q28>=`time' & Q28<.)

// Providing breastmilk, given formula in hospital after the time of interest,
// not given other liquids (or given other liquids after the time of interest)
// not given solid foods (or solid foods given after the time of interest)
replace exclusive_`time' = 1 if (Q7==1) & (Q8==1 & Q13==0 & Q14>=`time') & ///
    ((Q24==0) | (Q24==1 & Q26>=`time' & Q26<.) & ///
    ((Q27==0) | (Q27==1 & Q28>=`time' & Q28<.)

*****
***PATH TWO; Past week formula only***
*****
/*EXCLUSIVE*/
// Formula fed in the past week, previously attempted breastfeeding but stopped after
the time of interest,
// don't know, refused, or baby not given formula in hospital, and first gave formula
after the time of interest,
// not given other liquids, or other liquids given after the time of interest,
// not given solid foods, or solid foods given after the time of interest.
replace exclusive_`time' = 1 if (Q7==2) & (Q9==1 & Q10>=`time' & Q10<.) & ///
    (inlist(Q13,0,88,99) & Q14>=`time' & Q14<.) & ///
    (((Q24==0) | (Q24==1 & Q26>=`time' & Q26<.) & ///
    ((Q27==0) | (Q27==1 & Q28>=`time' & Q28<.)

*****
***PATH THREE; Past week combination breastmilk and formula***
*****
/*EXCLUSIVE*/
// Combination in the past week, don't know, refused, or baby not given formula in
hospital,
// and first gave formula after the time of interest,
// not given other liquids, or other liquids given after the time of interest,
// not given solid foods, or solid foods given after the time of interest.
replace exclusive_`time' = 1 if (Q7==3) & (Q14>=`time' & Q14<.) & ///
    ((Q24==0) | (Q24==1 & Q26>=`time' & Q28<.) & ///
    ((Q27==0) | (Q27==1 & Q28>=`time' & Q28<.)

// Replace missing values to represent non-exclusive breastfeeding.
replace exclusive_`time' = 0 if missing(exclusive_`time')
tabulate exclusive_`time'
*****
*****
*****
***ANY BREASTFEEDING***
*****
*** There is an underlying assumption that if the respondent indicates their ***
*** baby was provided formula in hospital, that this occurred within the ***
*** occurred two weeks after birth, and not months afterward. ***

```

```
// Fed breastmilk in the pastweek, provided formula in hospital,
// Fed breastmilk in the pastweek, provided formula in hospital, before the time of
interest
// given other liquids, or other liquids given before the time of interest,
// given solid foods, or solid foods given before the time of interest.

gen any_`time' = 1 if inlist(Q7,1,3) | (Q9==1 & Q10>=`time' & Q10<.)
    replace any_`time' = 0 if missing(any_`time')
    tabulate any_`time'

gen supplement_`time' = .
    replace supplement_`time' = any_`time'
    replace supplement_`time' = 0 if exclusive_`time'==1

gen stopped_`time' = 0
    replace stopped_`time' = 1 if !missing(Q10) & Q10<=`time'

order exclusive_`time' any_`time' supplement_`time' stopped_`time'
sort exclusive_`time' any_`time' supplement_`time' stopped_`time'
*browse
}
*

proportion ever_bf
display "The above table is proportion of babies who were ever breastfed"

forvalues i = 1(1)14 {
    proportion exclusive_`i'
    display "The above table is proportion of exclusive breastfeeders as of time-point
`i'"

    proportion supplement_`i'
    display "The above table is proportion of non-exclusive breastfeeders
(supplementing) as of time-point `i'"

    proportion any_`i'
    display "The above table is proportion of any breastfeeding as of time-point `i'"

// Optional
*proportion stopped_`i'
*display "The above table is proportion of babies who are no-longer breastfed at
all as of time-point `i'"
}
*****
*****
*** The breastfeeding indicators for each time-point have been created ***
*** in the datafile. These proportions and their corresponding ***
*** 95% confidence intervals are included in the results above. ***
*** Indicators are available for exclusive breastfeeding, non-exclusive/ ***
*** breastfeeding with supplementation, and the proportion of ***
*** respondents who had stopped breastfeeding by a given time-point. ***
*** ***
*** 1 = Less than 0.5 (2 weeks) ***
*** 2 = 0.5 to less than 1.0 month ***
```



```
*** 3 = 1.0 to less than 1.5 month ***
*** 4 = 1.5 to less than 2.0 months ***
*** 5 = 2.0 to less than 2.5 months ***
*** 6 = 2.5 to less than 3.0 months ***
*** 7 = 3.0 to less than 3.5 months ***
*** 8 = 3.5 to less than 4.0 months ***
*** 9 = 4.0 to less than 4.5 months ***
*** 10 = 4.5 to less than 5.0 months ***
*** 11 = 5.0 to less than 5.5 months ***
*** 12 = 5.5 to less than 6.0 months ***
*** 13 = 6.0 to less than 6.5 months ***
*** 14 = 6.5 to less than 7.0 months ***
```

```
*****
*****
```



Appendix D – SAS Syntax to Calculate Breastfeeding Indicators Required for Baby-Friendly Initiative (BFI) Designation with the Retrospective 6-Month Single Time Point Questionnaire

```

/*****
Task: Calculate Baby-Friendly Initiative (BFI) Outcome Indicators using the Locally
Driven Collaborative Project (LDCP) Retrospective 6-Month Single Time Point
Questionnaire (6MRQ)

```

Date created: September 13, 2016

Data Dictionary: Version: 2.2; Release: 05 April 2017

Date last modified: April 12, 2017

Authors: J. Deming, Epidemiologist & M. MacLeod, Health Data Analyst

```

/*****

```

The following syntax is a supplementary resource released as part of the LDCP 6MRQ Knowledge Translation project, funded by Public Health Ontario.

This syntax creates standard breastfeeding indicators that may be used to report local infant feeding rates as part of BFI designation.

This SAS syntax is to be used with infant feeding data collected using the LDCP 6MRQ, a data collection tool developed by the LDCP Infant Feeding Surveillance Pilot Study project team (2013–2015). The 6MRQ be accessed in the project final report here:

https://www.publichealthontario.ca/en/ServicesAndTools/Documents/LDCP/LDCP_Breastfeeding_Project_Final_Report_2015.pdf

Please note that the data dictionary and this syntax will not clean and prepare your data for analysis. Each analyst/user is responsible for the processing of their own raw dataset. Note that your dataset must be formatted to the specifications in the standard 6MRQ Data Dictionary, another resource developed as part of the LDCP 6MRQ Knowledge Translation project, in order for this syntax to run successfully.

Note that each public health unit may have removed, added, or modified questions from the 6MRQ; as such, the standard data dictionary may serve as a starting point for use of the 6MRQ. The 6MRQ project team recommends that any PHU-specific modifications use distinctly different variable names and labels to distinguish them from the original 6MRQ variables from the standard data dictionary.

For detailed explanation and definitions for the breastfeeding rate indicators created below, see the Core Indicator documents also developed by the 6MRQ project team.

Note that similar syntax was also developed in Stata. The SAS syntax and Stata syntax were developed independently but have been tested and produce similar results.

Caution is advised when adapting this syntax to meet your PHU infant feeding analysis needs. It has been tested and peer-reviewed but unfortunately we cannot guarantee an error-free experience. Use and adaptation of this syntax is done at your own risk.

Feedback on this syntax is welcome and can be directed to Jessica Deming at eha@regionofwaterloo.ca

```

/*****

```

Necessary 6MRQ variables:

Q7 - In the past week, what have you fed your baby? By this, we mean what milk?

Q8 - Since birth, including any time spent in hospital, has your baby ever been given any formula?

Q9 - Since birth, have you attempted to breastfeed or provide breastmilk to your baby, even if only once?

Q10 - How old was your baby in months when you stopped breastfeeding?

Q13 - Was your baby given formula in hospital?

Q14 - How old was your baby in months when they were first given formula?

Q24 - Since birth, has your baby ever been given any liquids other than breastmilk or formula, such as water, sugar water or juice?

Q26 - How old was your baby in months the first time they were given liquids other than breastmilk or formula?

Q27 - Since birth, has your baby ever been given any solid food, such as meat, chicken, cereal, vegetables or fruit?

Q28 - How old was your baby in months the first time they were given any solid food such as meat, chicken, cereal, vegetables or fruit?

This syntax produces the following derived variables:

1. ever_BF - breastfeeding initiation aka ever attempted to breastfeed

2. anyBF# - any breastfeeding as of x months of age

3. exclusiveBF# - exclusive breastfeeding as of x months of age

The any and exclusive breastfeeding variables are created for all time points from 0.5 to 6.5 months bemonths.

Note: The BCC has indicated that 5.5 months (i.e., "at or about" 6-months) is an acceptable

initiation point for introduction of solid foods, the introduction of other liquids, and the introduction of formula. The 6MRQ project team has confirmation from BCC and BFI Ontario

representatives that a cut-off of 5.5 months may be used to calculate breastfeeding rates for the 6 month time point.

Therefore, the variable exclusiveBF12 can be used to report exclusive breastfeeding at about 6 months.

For more information, see the LDCP 6MRQ Knowledge Translation Final Report (Released: May 2017).

/*****
Notes:

The calculation of all derived variables is contingent on a valid response to Q7.

This syntax follows the logic flow of the 6MRQ as it derives the new variables. This logic flow is also visualized in the Core Indicator flowcharts.

The syntax does NOT automatically exclude cases with missing responses to any of the necessary 6MRQ variables. It was done this way so as to maximize the potential for case inclusion in the derived variable, especially for the exclusive breastfeeding calculation.

Due to the complexity of the questionnaire and the definition of exclusivity, there are many potential variables involved but on a case by case basis, very few variables may actually be needed to successfully determine a negative value (i.e., no exclusive breastfeeding).

There is no minimum set of questions required for all cases to determine exclusivity. Q7 is the only required question.

For example, for exclusive breastfeeding:

If Q7= formula and Q9=no, then this is sufficient information to classify this case as no exclusive breastfeeding.

If Q7= breastmilk and Q8= yes and Q13= yes, then this is sufficient information to classify this case as no exclusive breastfeeding.

Note that at this time, this syntax does NOT provide an option for use with the revised 6MRQ tool - this will be a feature added in a future version of this syntax;

```

/*****
libname BFI 'insert your library filepath';
*options fmtsearch=(BFI.FORMATS); *optional statementstatement to call upon SAS formats;
options mprint;
%let inputdata= /*insert name of 6MRQ IFS SAS dataset to call upon*/ ;
%let outputdata= /*insert desired name of output dataset*/ ;

*create a binary yes/no format to apply to all derived variables;
proc format;
  value yesno
    1= "yes"
    0= "no";
run;

/*****
Macro to create any breastfeeding variables
for all time points from 0.5 to 6.5 months;
/*****/
/*Any breastfeeding is defined as those babies who, as of a given time point, were
receiving human milk (including expressed milk, donor milk) with or without
other liquids or solid foods*/
%MACRO anyBF;
anyBF&t=.;
if Q7=1 or Q7=3 then do;*where baby had breastmilk or combo in past 7 days;
  anyBF&t=1;
end;
if Q7=2 then do;*where baby had formula in past 7 days;
  if Q9=1 then do;
    if Q10 in (&t:14) then anyBF&t=1;
    else if . lt Q10 lt &t then anyBF&t=0;
  end;
  if Q9=0 then anyBF&t=0;
end;
attrib anyBF&t
  label="Any breastfeeding as of &time months"
  format=yesno.;
%MEND anyBF;

/*****
Macro for solid food/liquid food introduction:
This is a repetitive piece of the exclusive
breastfeeding indicator calculation which was more
succinct to put into a macro, to be called upon
throughout the exclusive breastfeeding macro;
/*****/
%MACRO solidsliquids;
  if Q24=0 then do;
    if Q27=0 then exclusiveBF&t=1;
  end;
end;

```

```

else if Q27=1 then do;
  if Q28 in (&t:14) then exclusiveBF&t=1;
  else if . lt Q28 lt &t then exclusiveBF&t=0;
end;
end;
else if Q24=1 then do;
  if Q26 in (&t:14) then do;
    if Q27=0 then exclusiveBF&t=1;
    else if Q27=1 then do;
      if Q28 in (&t:14) then exclusiveBF&t=1;
      else if . lt Q28 lt &t then exclusiveBF&t=0;
    end;
  end;
  else if . lt Q26 lt &t then exclusiveBF&t=0;
end;
end;
%MEND solidsliquids;

/*****
Macro to create exclusive breastfeeding variables
for all time points from 0.5 to 6.5 months;
*****/
/*Exclusive breastfeeding is defined as those babies who, as of a given time point, were
receiving human milk (including expressed milk, donor milk) and had not received
formula or other liquids, and had not been introduced to solid foods*/
%MACRO exclusiveBF;
exclusiveBF&t=.;
if Q7=1 then do;*Pathway 1: where baby had breastmilk in past 7 days;
  if Q8=0 then do;*baby never had any formula;
    %solidsliquids;
  end;
  else if Q8=1 then do;*baby had formula but after time point of interest;
    if Q13 in (0,88,99) then do;
      if Q14 in (&t:14) then do;
        %solidsliquids;
      end;
      else if . lt Q14 lt &t then exclusiveBF&t=0;
    end;
    else if Q13=1 then exclusiveBF&t=0;
  end;
end;
else if Q7=2 then do;*Pathway 2: where baby had formula only in past 7 days;
  if Q9=1 then do;
    if Q10 in (&t:14) then do;
      if Q13 in (0,88,99) then do;
        if Q14 in (&t:14) then do;
          %solidsliquids;
        end;
        else if . lt Q14 lt &t then exclusiveBF&t=0;
      end;
      else if Q13=1 then exclusiveBF&t=0;
    end;
    else if . lt Q10 lt &t then exclusiveBF&t=0;
  end;
  else if Q9=0 then exclusiveBF&t=0;
end;
else if Q7=3 then do;*Pathway 3: where baby had combination in past 7 days;
  if Q13 in (0,88,99) then do;

```

```

    if Q14 in (&t:14) then do;
        %solidsliquids;
    end;
    else if . lt Q14 lt &t then exclusiveBF&t=0;
end;
else if Q13=1 then exclusiveBF&t=0;
end;

attrib exclusiveBF&t
    label="Exclusive breastfeeding as of &time months"
    format=yesno.;
%MEND exclusiveBF;

data BFI.&outputdata;
set BFI.&inputdata;

*remove ineligible respondents and those without a valid response to Q7;
if dEligible=0 or Q7=. then delete;

/*****
Create breastfeeding initiation variable;
AKA Ever attempted to breastfeed;
*****/
/*The BCC has confirmed that the 'ever attempted to breastfeed' Core Indicator using
the 6MRQ is sufficient to meet the BFI requirement for a breastfeeding initiation rate*/
ever_BF=.;
if Q7=1 or Q7=3 then ever_BF=1; *for cases with breastmilk or combo in past 7 days;
else if Q7=2 then do;*for cases with formula in past 8 days;
    if Q9=1 then ever_BF=1;
    else if Q9=0 then ever_BF=0;
end;
attrib ever_BF
    label="Ever breastfed since birth"
    format=yesno.;

/*Now to run the anyBF and exclusiveBF macros for each time point*/
%let time=0.5;    %let t=2; %anyBF; %exclusiveBF;
%let time=1;    %let t=3; %anyBF; %exclusiveBF;
%let time=1.5;    %let t=4; %anyBF; %exclusiveBF;
%let time=2;    %let t=5; %anyBF; %exclusiveBF;
%let time=2.5;    %let t=6; %anyBF; %exclusiveBF;
%let time=3;    %let t=7; %anyBF; %exclusiveBF;
%let time=3.5;    %let t=8; %anyBF; %exclusiveBF;
%let time=4;    %let t=9; %anyBF; %exclusiveBF;
%let time=4.5;    %let t=10; %anyBF; %exclusiveBF;
%let time=5;    %let t=11; %anyBF; %exclusiveBF;
%let time=5.5;    %let t=12; %anyBF; %exclusiveBF;
%let time=6;    %let t=13; %anyBF; %exclusiveBF;
%let time=6.5;    %let t=14; %anyBF; %exclusiveBF;
run;

/*****
Running frequencies and validating derived variables;
*****/
*This procedure produces frequencies of the new variables.
A quick overview to ensure they were produced properly;
title 'Frequencies of new derived variables';

```

```
proc freq data=BFI.&outputdata;
tables ever_BF--exclusiveBF14;
run;

/*Optional validation checks -- uncomment to run procedures;

*This procedure compares any BF @ all the time points.
The result should be a 'drop out' over time.
i.e., as time increases, the number in the "yes" category should decrease.
i.e., n in the upper right cell of each cross-tabulation result should =0
Anything different should be considered an error;
title 'Cross-compare all the any breastfeeding variables';
proc freq data=BFI.&outputdata;
tables anyBF2*(anyBF3-anyBF14) anyBF3*(anyBF4-anyBF14) anyBF4*(anyBF5-anyBF14)
anyBF5*(anyBF6-anyBF14) anyBF6*(anyBF7-anyBF14) anyBF7*(anyBF8-anyBF14)
anyBF8*(anyBF9-anyBF14) anyBF9*(anyBF10-anyBF14) anyBF10*(anyBF11-anyBF14)
anyBF11*(anyBF12-anyBF14) anyBF12*(anyBF13-anyBF14)
anyBF13*anyBF14 /nocum norow;
run;

*same as above only comparing exclusive BF @ all the time points;
title 'Cross-compare all the exclusive breastfeeding variables';
proc freq data=BFI.&outputdata;
tables exclusiveBF2*(exclusiveBF3-exclusiveBF14)
exclusiveBF3*(exclusiveBF4-exclusiveBF14) exclusiveBF4*(exclusiveBF5-exclusiveBF14)
exclusiveBF5*(exclusiveBF6-exclusiveBF14) exclusiveBF6*(exclusiveBF7-exclusiveBF14)
exclusiveBF7*(exclusiveBF8-exclusiveBF14) exclusiveBF8*(exclusiveBF9-exclusiveBF14)
exclusiveBF9*(exclusiveBF10-exclusiveBF14) exclusiveBF10*(exclusiveBF11-exclusiveBF14)
exclusiveBF11*(exclusiveBF12-exclusiveBF14) exclusiveBF12*(exclusiveBF13-exclusiveBF14)
exclusiveBF13*exclusiveBF14 /nocum norow;
run;

*The following procedures show instances of missing values for the new variables,
to allow the user to verify whether they are a legitimate result of missing
responses to the relevant survey questions;
*If there are any cases with valid responses for all survey questions printed then
this should be considered an error;
title 'Verify ever_BF missing values are legitimate - i.e. one or missing relevant survey
questions';
proc print data=BFI.&outputdata;
where ever_BF=.;
var Q7 Q9;
run;

title 'Verify any BF missing values are legitimate - i.e. one or more missing relevant
survey questions';
proc print data=BFI.&outputdata;
where anyBF2=. OR anyBF3=. OR anyBF4=. OR anyBF5=. OR anyBF6=. OR anyBF7=. OR anyBF8=.
OR anyBF9=. OR anyBF10=. OR anyBF11=. OR anyBF12=. OR anyBF13=. OR anyBF14=.;
var Q7 Q9 Q10;
run;

title 'Verify exclusive BF Q7=breastmilk missing values are legitimate - i.e. one or more
missing relevant survey questions';
proc print data=BFI.&outputdata;
where Q7=1 and (exclusiveBF2=. OR exclusiveBF3=. OR exclusiveBF4=. OR exclusiveBF5=.
OR exclusiveBF6=. OR exclusiveBF7=. OR exclusiveBF8=. OR exclusiveBF9=. OR
```

```
exclusiveBF10=. OR exclusiveBF11=. OR exclusiveBF12=. OR exclusiveBF13=. OR
exclusiveBF14=.);
var Q7 Q8 Q13 Q14 Q24 Q26 Q27 Q28;
run;
```

```
title 'Verify exclusive BF Q7=formula missing values are legitimate - i.e. one or more
missing relevant survey questions';
proc print data=BFI.&outputdata;
where Q7=2 and (exclusiveBF2=. OR exclusiveBF3=. OR exclusiveBF4=. OR exclusiveBF5=.
OR exclusiveBF6=. OR exclusiveBF7=. OR exclusiveBF8=. OR exclusiveBF9=. OR
exclusiveBF10=. OR exclusiveBF11=. OR exclusiveBF12=. OR exclusiveBF13=. OR
exclusiveBF14=.);
var Q7 Q9 Q10 Q13 Q14 Q24 Q26 Q27 Q28;
run;
```

```
title 'Verify exclusive BF Q7=combo missing values are legitimate - i.e. one or more
missing relevant survey questions';
proc print data=BFI.&outputdata;
where Q7=3 and (exclusiveBF2=. OR exclusiveBF3=. OR exclusiveBF4=. OR exclusiveBF5=.
OR exclusiveBF6=. OR exclusiveBF7=. OR exclusiveBF8=. OR exclusiveBF9=. OR
exclusiveBF10=.
OR exclusiveBF11=. OR exclusiveBF12=. OR exclusiveBF13=. OR exclusiveBF14=.);
var Q7 Q13 Q14 Q24 Q26 Q27 Q28;
run;
```

*The following procedures show a cross-tabulation of relevant survey questions where the new derived variables equal "yes". This allows the user to verify whether all cases are appropriately classified in the numerator.

Comparing the frequencies in these tables with the Core Indicator flowcharts to verify appropriate classification of "yes" cases is strongly encouraged;

```
title 'Verify ever_BF "yes" values are legitimate';
```

```
proc freq data=BFI.&outputdata;
where ever_BF=1;
tables Q7*Q9;
run;
```

*first verifying "yes" values;

*Manually change the anyBF variable number (e.g., anyBF2... anyBF14) to verify other derived variables;

```
title 'Verify anyBF Yes values are legitimate';
```

```
proc freq data=BFI.&outputdata;
where anyBF12=1;
tables anyBF12*Q7 Q7*Q9 Q9*Q10;
run;
```

*Manually change the exclusiveBF variable number (e.g., exclusiveBF2... exclusiveBF14) to verify other derived variables;

```
title 'Verify exclusiveBF Yes values are legitimate (Q7=breastmilk)';
```

```
proc freq data=BFI.&outputdata;
where exclusiveBF12=1 and Q7=1;
tables exclusiveBF12*Q7 Q7*Q8 Q8*Q13 Q8*Q14 Q8*Q24 Q24*Q26 Q24*Q27 Q27*Q28;
run;
```

*Manually change the exclusiveBF variable number (e.g., exclusiveBF2... exclusiveBF14) to verify other derived variables;

```
title 'Verify exclusiveBF Yes values are legitimate (Q7=formula)';
```

```
proc freq data=BFI.&outputdata;
```

```
where exclusiveBF12=1 and Q7=2;
tables exclusiveBF12*Q7 Q7*Q9 Q9*Q10 Q10*Q13 Q13*Q14 Q14*Q24 Q24*Q26 Q24*Q27 Q27*Q28;
run;
```

```
*Manually change the exclusiveBF variable number (e.g., exclusiveBF2... exclusiveBF14) to
verify other derived variables;
title 'Verify exclusiveBF Yes values are legitimate Q7=combo>';
proc freq data=BFI.&outputdata;
where exclusiveBF12=1 and Q7=3;
tables exclusiveBF12*Q7 Q7*Q13 Q13*Q14 Q14*Q24 Q24*Q26 Q24*Q27 Q27*Q28;
run;
```

```
*next verifying "no" values;
*Manually change the anyBF variable number (e.g., anyBF2... anyBF14) to verify other
derived variables;
title 'Verify anyBF no values are legitimate';
proc freq data=BFI.&outputdata;
where anyBF12=0;
tables anyBF12*Q7 Q7*Q9 Q9*Q10;
run;
```

```
*Manually change the exclusiveBF variable number (e.g., exclusiveBF2... exclusiveBF14) to
verify other derived variables;
*At least one of Q14, Q26 or Q28 should be a time period less than the time point of
interest. E.g. for exclusiveBF12 time point= 5.5 months. Anything else should be
considered an error;
title 'Verify exclusiveBF no values are legitimate (Q7=breastmilk)';
proc print data=BFI.&outputdata;
where exclusiveBF12=0 and Q7=1 and Q8=1 and Q13=0;
var Q7 Q8 Q13 Q14 Q26 Q28;
run;
```

```
*Manually change the exclusive BF variable number (e.g., exclusiveBF2... exclusiveBF14)
to verify other derived variables;
*At least one of Q10, Q14, Q26 or Q28 should be a time period less than the time point of
interest. E.g. for exclusiveBF12 time point= 5.5 months. Anything else should be
considered an error;
title 'Verify exclusiveBF no values are legitimate (Q7=breastmilk)';
proc print data=BFI.&outputdata;
where exclusiveBF12=0 and Q7=2 and Q9=1 and Q13=0;
var Q7 Q9 Q10 Q13 Q14 Q26 Q28;
run;
```

```
*Manually change the exclusive BF variable number (e.g., exclusiveBF2... exclusiveBF14)
to verify other derived variables;
*At least one of Q14, Q26 or Q28 should be a time period less than the time point of
interest. E.g. for exclusiveBF12 time point= 5.5 months. Anything else should be
considered an error;
title 'Verify exclusiveBF no values are legitimate (Q7=breastmilk)';
proc print data=BFI.&outputdata;
where exclusiveBF12=0 and Q7=3 Q13=0;
var Q7 Q9 Q10 Q13 Q14 Q26 Q28;
run;
*/
title;
/*****end of syntax*****/
```

Appendix E: Data Dictionary for the Retrospective 6-Month Single Time Point Questionnaire

Version 2.2 Release: 05 April 2017

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q1	Consent_participate	Do you wish to participate in this survey?	All potential respondents	Acquiring consent	Yes	1
					Yes, but not now	2
					No	0
Q2	Consent_Contact	May we call you back at a later time to conduct the survey?	Respondents who consented to be contacted to complete the survey at a later time (Q1=2)	Acquiring consent	Yes	1
					No	0
Q3	Live_together	Is your baby currently living with you?	Respondents who consented to participate (Q1=1)	Determining eligibility	Yes	1
					No	0
Q4	Confirm_PHU	Are you currently living in _____ Region?	Respondents who live with their baby (Q3=1)	Determining eligibility	Yes	1
					No	0
dEligible	Eligibility_Flag		Respondents who consented to participate (Q1=1) & who live with their baby (Q3=1) & currently live within the PHU region (Q4=1)	Derived variable to determine whether potential respondent is eligible to participate in survey. Variables used for derivation: Q3 and Q4. Eligible: Q3=1 and Q4=1	Eligible	1
					Not eligible	0
Q5a	Confirm_Baby_DOB	Can you confirm that your baby was born on _____ (read birthdate)?	All eligible respondents (dEligible=1)	Baby's DOB is from ISCIS. Q5a and Q5b are for data quality checks only. Q5a and Q5b mark end of consent and eligibility questions.	Yes	1
					No	0
Q5b	Baby_DOB	What is your baby's birthdate?	Respondents who answered Q5a=0	DOB must be < date of survey but >= current date – 5.5 or 6 months. Q5a and Q5b mark end of consent and eligibility questions.	YYYY/MM/DD	YYYY/MM/DD

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q6	Multiples	On this date, did you give birth to one baby or multiple babies?	All eligible respondents (dEligible=1)	First survey question - asked of all respondents who consented and were eligible to participate. Where response to Q6=1 (multiples), the entire survey from here on is to be conducted once for each baby.	Single	0
					Multiples	1
Q7	Milk_Past_Week	In the past week, what have you fed your baby? By this, we mean what milk?	All eligible respondents (dEligible=1)		Breastmilk	1
					Formula	2
					Combination of breastmilk and formula	3
Q8	Ever_Formula	Since birth, including any time spent in hospital, has your baby ever been given any formula?	Respondents who fed breastmilk only in past week (Q7=1)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q9	Ever_BF	Since birth, have you attempted to breastfeed or provide breastmilk to your baby, even if only once?	Babies who were fed formula only in past week (Q7=2)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q10	Age_Stop_BF	How old was your baby in months when you stopped breastfeeding?	Babies who were fed formula only in past week (Q7=2) AND ever attempted to breastfeed (Q9=1)		<0.5 months	1
					0.5 to <1 month	2
					1 to <1.5 month	3
					1.5 to <2 months	4
					2 to <2.5 months	5
					2.5 to <3 months	6

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					3 to <3.5 months	7
					3.5 to <4 months	8
					4 to < 4.5 months	9
					4.5 to <5 months	10
					5 to <5.5 months	11
					5.5 to <6 months	12
					6 to <6.5 months	13
					6.5 to <7 months	14
					Don't know/ can't recall	88
					Refused	99
Q11_BR1	Stop_BF_BR1	Baby Reasons - Baby unable to latch/ not breastfeeding well/ tongue tied	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_BR2	Stop_BF_BR2	Baby Reasons - Classic galactosemia, maple syrup urine disease, PKU	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_BR3	Stop_BF_BR3	Baby Reasons - Baby hungry, fussy, colicky	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					Don't know/Can't recall	88
					Refused	99
Q11_BR4	Stop_BF_BR4	Baby Reasons - Baby not gaining weight well	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_BR5	Stop_BF_BR5	Baby Reasons - Jaundice	Babies who were fed formula only in past week (Q7=2) AND ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_BR6	Stop_BF_BR6	Baby Reasons - Low blood sugar	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_BR7	Stop_BF_BROth	Baby Reasons - Other health issues	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_BR7_Tx	Stop_BF_BR_Text	Baby Reasons - Other health issues - specify	Babies who were fed formula only in past week (Q7=2) AND ever attempted to breastfeed (Q9=1)	Text responses from Q11_BR7	<open text comments>	Text

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q11_BR8	Stop_BF_BR8	Maternal Reasons - Problems with expressing or delivering breastmilk (including pumping and lactation aids)	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_MR1	Stop_BF_MR1	Maternal Reasons - Not enough milk	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_MR2	Stop_BF_MR2	Maternal Reasons - Health reasons (surgery, medication, ill)	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_MR3	Stop_BF_MR3	Maternal Reasons - Pain (sore nipples/breasts, biting)	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_MR4	Stop_BF_MR4	Maternal Reasons - Lifestyle (smoking, diet, alcohol)	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					Refused	99
Q11_MR5	Stop_BF_MR5	Maternal Reasons - Previous experience	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_OR1	Stop_BF_OR1	Other Reasons - Convenience	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_OR2	Stop_BF_OR2	Other Reasons - Separation	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_OR3	Stop_BF_OR3	Other Reasons - Encouraged by family/friend/partner	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_OR4	Stop_BF_OR4	Other Reasons - Advice of a health care professional	Babies who were fed formula only in past week (Q7=2) AND their		Yes	1
					No	0

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
			mother ever attempted to breastfeed (Q9=1)		Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_OR5	Stop_BF_Oth	Other Reasons	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_OR5_Tx	Stop_BF_OthText	Other Reasons - specify	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)	Text responses from Q11_OR5	<open text comments>	Text
Q12_BR1	Not_BF_BR1	Baby Reasons - Classic galactosemia, maple syrup urine disease, PKU	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q12_BR2	Not_BF_BROth	Baby Reasons - Other health issues	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q12_BR2_Tx	Not_BF_BR2_OthText	Baby Reasons - Other health issues- specify	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)	Text responses from Q12_BR2	<open text comments>	Text

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q12_MR1	Not_BF_MR1	Maternal Reasons - Health reasons (surgery, medication, ill)	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q12_MR2	Not_BF_MR2	Maternal Reasons - Maternal lifestyle (smoking, diet, alcohol)	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q12_MR3	Not_BF_MR3	Maternal Reasons - Previous experience	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q12_OR1	Not_BF_OR1	Other Reasons - Convenience	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q12_OR2	Not_BF_OR2	Other Reasons - Separation	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					Refused	99
Q12_OR3	Not_BF_OR3	Other Reasons - Encouraged by family/friend/partner	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q12_OR4	Not_BF_OR4	Other Reasons - Advice of a health care professional	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q12_OR5	Not_BF_OR5	Other reasons	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q12_OR5_Tx	Not_BF_OR_OthText	Other reasons - specify	Babies who were fed formula only in past week (Q7=2) AND their mother never attempted to breastfeed (Q9=0)	Text responses from Q12_OR5	<open text comments>	Text
Q13	Formula_Hospital	Was your baby given formula in hospital?	All eligible respondents except those who reported their baby has never been given any formula (Q8=0).		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q14	Age_Formula	How old was your baby in	Babies who were fed formula or	Determining whether baby	<0.5 months	1

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
		months when they were first given formula?	combination of breastmilk and formula in the past week (Q7=2 Q7=3).	has been breastfed exclusively at earlier time points prior to 6 months (e.g., 2 months, 4 months)	0.5 to <1 month	2
					1 to <1.5 month	3
					1.5 to <2 months	4
					2 to <2.5 months	5
					2.5 to <3 months	6
					3 to <3.5 months	7
					3.5 to <4 months	8
					4 to < 4.5 months	9
					4.5 to <5 months	10
					5 to <5.5 months	11
					5.5 to <6 months	12
					6 to <6.5 months	13
					6.5 to <7 months	14
					Don't know/ can't recall	88
Refused	99					
Q15	HCP_Formula	Did a health care professional recommend that you give your baby formula?	Babies who were fed formula or combination of breastmilk and formula in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q16_H1	HCP_H1	Hospital - Doctor (including obstetrician)	Respondents who indicated that a HCP recommended giving formula (Q15=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					Refused	99
Q16_H2	HCP_H2	Hospital - Nurse	Respondents who indicated that a HCP recommended giving formula (Q15=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_H3	HCP_H3	Hospital - Lactation consultant	Respondents who indicated that a HCP recommended giving formula (Q15=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_H4	HCP_H4	Hospital - Midwife	Respondents who indicated that a HCP recommended giving formula (Q15=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_C1	HCP_C1	Community - Doctor	Respondents who indicated that a HCP recommended giving formula (Q15=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_C2	HCP_C2	Community - Lactation consultant	Respondents who indicated that a HCP recommended giving formula		Yes	1
					No	0

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
			(Q15=1)		Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_C3	HCP_C3	Community - Nurse practitioner	Respondents who indicated that a HCP recommended giving formula (Q15=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_C4	HCP_C4	Community - Public health nurse	Respondents who indicated that a HCP recommended giving formula (Q15=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_O1	HCP_Oth	Other Healthcare professional who recommended formula	Respondents who indicated that a HCP recommended giving formula (Q15=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_O1_Tx	HCP_OthText	Other Healthcare professional who recommended formula - specify	Respondents who indicated that a HCP recommended giving formula (Q15=1)	Text responses from Q16_O1	<open text comments>	Text
Q17_BR1	Formula_BR1	Baby Reasons - Baby unable to latch/not	Respondents who reported feeding formula or combination of formula		Yes	1
					No	0

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
		breastfeeding well/tongue tied	and breastmilk in the past week (Q7=2 Q7=3).		Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_BR2	Formula_BR2	Baby Reasons - Classic galactosemia, maple syrup urine disease, PKU	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_BR3	Formula_BR3	Baby Reasons - Baby hungry, fussy, colicky	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_BR4	Formula_BR4	Baby Reasons - not gaining weight well	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_BR5	Formula_BR5	Baby Reasons - Jaundice	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q17_BR6	Formula_BR6	Baby Reasons - Low blood sugar	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_BR7	Formula_BROth	Baby Reasons - Other health issues	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_BR7_Tx	Formula_BROthText	Baby Reasons - Other health issues - specify	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).	Text responses from Q17_BR7	<open text comments>	Text
Q17_MR1	Formula_MR1	Maternal Reasons - Not enough milk	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_MR2	Formula_MR2	Maternal Reasons - Health reasons (surgery, medication, ill)	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q17_MR3	Formula_MR3	Maternal Reasons - Pain (sore nipples/breasts, biting)	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_MR4	Formula_MR4	Maternal Reasons - Maternal lifestyle (smoking, diet, alcohol)	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_MR5	Formula_MR5	Maternal Reasons - Previous experience	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_OR1	Formula_OR1	Other Reasons - Convenience	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_OR2	Formula_OR2	Other Reasons - Separation	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					Don't know/Can't recall	88
					Refused	99
Q17_OR3	Formula_OR3	Other Reasons - Encouraged by family/friend/partner	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_OR4	Formula_OR4	Other Reasons - Advice of a health care professional	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_OR5	Formula_Oth	Other Reasons	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q17_OR5_Tx	Formula_OthText	Other Reasons - specify	Babies who were fed formula or combination of formula and breastmilk in the past week (Q7=2 Q7=3).	Text response from Q17_OR5	<open text comments>	Text
Q18	Work_School_BF	Is returning to work or school a factor in how long you plan to breastfeed or give breastmilk?	Babies who were fed breastmilk or combination of formula and breastmilk in the past week (Q7=1 Q7=2)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q19	Age_Stop_BF2	How old will your child be in months when you plan to stop breastfeeding or giving breastmilk?	Babies who were fed breastmilk or combination of formula and breastmilk in the past week (Q7=1 Q7=2)		6 to <6.5 months	1
					6.5 to <7 months	2
					7 to <7.5 months	3
					7.5 to <8 months	4
					8 to <8.5 months	5
					8.5 to <9 months	6
					9 to <9.5 months	7
					9.5 to <10 months	8
					10 to <10.5 months	9
					10.5 to <11 months	10
					11 to <11.5 months	11
					11.5 to <12 months	12
					12 to <15 months	13
					15 to <18 months	14
					18 to <21 months	15
					21 to <24 months	16
					2 years or more	17
Until baby weans	18					
No plans/don't know	19					
Other	20					
Refused	99					
Q19_Tx	Age_Stop_Oth	Age of child when you plan to stop breastfeeding - other - specify	Respondents who indicated other age when they planned to stop breastfeeding (Q19=20)		<open text comments>	Text

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q20	Feed_Diff	Have you had any difficulties or concerns with feeding your baby?	Respondents who reported feeding breastmilk or combination of formula and breastmilk in the past week (Q7=1 Q7=2)		Yes	1
					No	0
					Don't know/ can't recall	88
					Refused	99
Q21_BR1	Feed_Diff2_BR1	Baby Reasons - Baby unable to latch/not breastfeeding well/tongue tied	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_BR2	Feed_Diff2_BR2	Baby Reasons -Baby hungry, fussy, colicky	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_BR3	Feed_Diff2_BR3	Baby Reasons -Baby not gaining weight well	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_BR4	Feed_Diff2_BR4	Baby Reasons - Low blood sugar	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q21_BR5	Feed_Diff2_BROth	Baby Reasons -Other health issues	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_BR5_Tx	Feed_Diff2_BROthText	Baby Reasons -Other health issues - specify	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).	Text responses from Q21_BR5	<open text comments>	Text
Q21_BR6	Feed_Diff2_BR6	Baby Reasons – Problems with expressing or delivering breastmilk (including pumping and lactation aids)	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_MR1	Feed_Diff2_MR1	Maternal Reasons – Not enough milk	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_MR2	Feed_Diff2_MR2	Maternal Reasons - Health reasons (surgery, medication, ill)	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q21_MR3	Feed_Diff2_MR3	Maternal Reasons – Pain (sore nipples/breasts, biting)	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_MR4	Feed_Diff2_MR4	Maternal Reasons - Maternal lifestyle (smoking, diet, alcohol)	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_OR1	Feed_Diff2_OR1	Other Reasons - Separation	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_OR3	Feed_Diff2_Oth	Other Reasons - other	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_OR3_Tx	Feed_Diff2_OthText	Other Reasons - specify	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).	Text response from Q21_OR3	<open text comments>	Text

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q22	Use_Prog	Did you use any programs or services to help you with feeding your baby?	All eligible respondents (dEligible=1)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q23_PH1	Use_Prog2_PH1	Public Health programs - Public Health breastfeeding clinic	Respondents who used one or more programs or services to help with feeding baby (Q22=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q23_PH2	Use_Prog2_PH2	Public Health programs - HBHC program	Respondents who used one or more programs or services to help with feeding baby (Q22=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q23_PH3	Use_Prog2_PHOth	Public Health programs - Other	Respondents who used one or more programs or services to help with feeding baby (Q22=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q23_PH3_Tx	Use_Prog2_PHOthText	Public Health programs - Other - specify	Respondents who used one or more programs or services to help with feeding baby (Q22=1)	Text responses from Q23_PH3	<open text comments>	Text
Q23_NPH1	Use_Prog2_NPH1	Non-Public Health programs - 24-hour	Respondents who used one or more programs or services to help		Yes	1
					No	0

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
		breastfeeding line	with feeding baby (Q22=1)		Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q23_NPH2	Use_Prog2_NPH2	Non-Public Health programs - La Leche League	Respondents who used one or more programs or services to help with feeding baby (Q22=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q23_NPH3	Use_Prog2_NPH3	Non-Public Health programs - Telehealth	Respondents who used one or more programs or services to help with feeding baby (Q22=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q23_NPH4	Use_Prog2_NPH4	Non-Public Health programs - Private lactation consultant	Respondents who used one or more programs or services to help with feeding baby (Q22=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q23_NPH5	Use_Prog2_NPH5	Non-Public Health programs - Hospital breastfeeding clinic	Respondents who used one or more programs or services to help with feeding baby (Q22=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q23_OR1	Use_Prog2_Oth	Other programs	Respondents who used one or more programs or services to help with feeding baby (Q22=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q23_OR1_Text	Use_Prog2_OthText	Other programs - specify	Respondents who used one or more programs or services to help with feeding baby (Q22=1)	Text response from Q23_OR1	<open text comments>	Text
Q24	Other_Liquid	Since birth, has your baby ever been given any liquids other than breastmilk or formula, such as water, sugar water or juice? Other liquids do not include vitamins or medications.	All eligible respondents (dEligible=1)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q25_1	Other_Liquid2_1	Other Liquids given - Water	Respondents whose baby ever been given any other liquids (Q24=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q25_2	Other_Liquid2_2	Other Liquids given - Sugar water	Respondents whose baby ever been given any other liquids (Q24=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q25_3	Other_Liquid2_3	Other Liquids given - Juice	Respondents whose baby ever been given any other liquids (Q24=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q25_4	Other_Liquid2_4	Other Liquids given - Cow's milk	Respondents whose baby ever been given any other liquids (Q24=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q25_5	Other_Liquid2_5	Other Liquids given - Plant-based milk (almond, soy, rice, etc.)	Respondents whose baby ever been given any other liquids (Q24=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q25_6	Other_Liquid2_6	Other Liquids given - Tea	Respondents whose baby ever been given any other liquids (Q24=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q25_7	Other_Liquid2_Oth	Other Liquids given	Respondents whose baby ever been given any other liquids (Q24=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					Refused	99
Q25_7_Tx	Other_Liquid2_OthText	Other Liquids given - specify	Respondents whose baby ever been given any other liquids (Q24=1)	Text responses from Q25_7	<open text comments>	Text
Q26	Age_Liquids	How old was your baby in months the first time they were given liquids other than breastmilk or formula?	Respondents whose baby ever been given any other liquids (Q24=1)		<0.5 months	1
					0.5 to <1 month	2
					1 to <1.5 month	3
					1.5 to <2 months	4
					2 to <2.5 months	5
					2.5 to <3 months	6
					3 to <3.5 months	7
					3.5 to <4 months	8
					4 to < 4.5 months	9
					4.5 to <5 months	10
					5 to <5.5 months	11
					5.5 to <6 months	12
					6 to <6.5 months	13
					6.5 to <7 months	14
				Don't know/ can't recall	88	
				Refused	99	
Q27	Ever_Solids	Since birth, has your baby ever been given any solid food such as meat, chicken, cereal, vegetables, or fruit?	All eligible respondents (dEligible=1)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q28	Age_Solids	How old was your baby in months the first time they were given any solid food, such as meat, chicken, cereal, vegetables, or fruit?	Respondents whose baby ever been given any solid food (Q27=1)		<0.5 months	1
					0.5 to <1 month	2
					1 to <1.5 month	3
					1.5 to <2 months	4
					2 to <2.5 months	5
					2.5 to <3 months	6
					3 to <3.5 months	7
					3.5 to <4 months	8
					4 to < 4.5 months	9
					4.5 to <5 months	10
					5 to <5.5 months	11
					5.5 to <6 months	12
					6 to <6.5 months	13
					6.5 to <7 months	14
Don't know/ can't recall	88					
Refused	99					
Q29	HCP_Solids	Did a health care professional recommend that you give your baby solids then?	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q30_BR1	Solids_BR1	Baby Reasons - Baby will gain more weight	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0
					Not stated	77

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					Don't know/Can't recall	88
					Refused	99
Q30_BR2	Solids_BR2	Baby Reasons - Baby had teeth	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q30_BR3	Solids_BR3	Baby Reasons - Baby wanted solids	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q30_BR4	Solids_BR4	Baby Reasons - To sleep better	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q30_BR5	Solids_BR5	Baby Reasons - Reflux	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q30_BR6	Solids_BR6	Baby Reasons - To avoid allergies	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q30_OR1	Solids_OR1	Other Reasons - Felt like he/she was ready	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q30_OR2	Solids_OR2	Other Reasons - Previous experience	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q30_OR3	Solids_Oth	Other Reasons - Other	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q30_OR3_Tx	Solids_OthText	Other Reasons - Other, specify	Respondents whose baby ever been given any solid food (Q27=1)	Text responses from Q30_OR3	<open text comments>	Text
Q31	Iron_Food	Had your baby had any iron-containing foods like meat, iron-fortified infant cereal, tofu, or lentils?	Respondents whose baby ever been given any solid food (Q27=1)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q32	Age_Solids2	How old will your baby be in months when you intend to introduce solid foods?	Respondents whose baby ever been given any solid food (Q27=0)		6 to <6.5 months	1
					6.5 to <7 months	2
					7 to <7.5 months	3
					7.5 to <8 months	4
					8 to <8.5 months	5
					8.5 to <9 months	6
					9 to <9.5 months	7
					9.5 to <10 months	8
					10 to <10.5 months	9
					10.5 to <11 months	10
					11 to <11.5 months	11
					11.5 to <12 months	12
					1 year or older	13
					When baby gets teeth	14
No plans/ Don't know	15					
Refused	99					
Q33	Mother_DOB	What is your date of birth?	All eligible respondents (dEligible=1)	Asked only if blank (i.e., not available from ISCIS)	YYYY/MM/DD	YYYY/MM/DD
					Refused	1900/01/01
Q34	First_Baby	Is this your first baby? (or babies in the event of multiples)	All eligible respondents (dEligible=1)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q35	Ever_BF2	Have you breastfed or tried to breastfeed before?	Respondents who answered Q34=0		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q36	Prenatal_Class	In the past 5 years, have you participated in a prenatal class that included information about breastfeeding?	All eligible respondents (dEligible=1)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q37	Prenatal_PHU	Was this prenatal class provided through your local health unit?	Respondents who have participated in a prenatal class (Q36=1)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q38	Marital_status	What is your marital status?	All eligible respondents (dEligible=1)		Married/common-law	1
					Divorced/separated	2
					Single	3
					Widowed	4
					Other	5
					Refused	99
Q39	Education	What is your highest level of education?	All eligible respondents (dEligible=1)		Some high school	1
					High school or equivalent	2
					Some post-secondary	3
					College/university	4
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q40	Income	What was your total family income before taxes last year?	All eligible respondents (dEligible=1)		Less than \$30,000	1
					\$30,000-\$59,999	2
					\$60,000-\$89,999	3
					\$90,000-\$119,999	4
					\$120,000-\$149,999	5
					\$150,000 or more	6
					Don't know/can't recall	88
					Refused	99
Q41	Income_support	How many people does this income support?	Respondents who provided a valid income response (Q40 <88)		Numeric value	Numeric value 0 < 88
					Refused	99
Q42	Immigrant_status	Were you born in Canada?	All eligible respondents (dEligible=1)		Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q43	Immigration_Year	What year did you arrive in Canada?	Respondents who were not born in Canada (Q42=0)		YYYY	YYYY
					Don't know/Can't recall/Refused	1900
Q44	Ethnic	How would you describe your racial or ethnic group?	All eligible respondents (dEligible=1)	Only one response option allowed	Asian-East (e.g. Chinese, Japanese, Korean)	1
					Asian-South (e.g. Indian, Pakistani, Sri Lankan)	2
					Asian-South East (e.g. Malaysian, Filipino, Vietnamese)	3

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					Black-African (e.g. Ghanaian, Kenyan, Somali)	4
					Black-North American (e.g. Canadian, American)	5
					Black-Caribbean (e.g. Barbadian, Jamaican)	6
					First Nations	7
					Indian-Caribbean (e.g. Guyanese, with origins in India)	8
					Indigenous/Aboriginal not included elsewhere	9
					Inuit	10
					Latin American (e.g. Argentinean, Chilean, Salvadorian)	11
					Metis	12
					Middle Eastern (e.g. Egyptian, Iranian, Lebanese)	13
					White-European (e.g. English, Italian, Russian)	14
					White-North American (e.g. Canadian, American)	15
					Mixed Heritage - specify	16
					Other - specify	17
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q44_TX	Ethnic_Oth	Ethnicity - Mixed heritage or other - specify	Respondents who answered (Q44=16,17)		<open text comments>	Text
Q45	Consent_12m	May we call you back when your baby is 12 months old to ask you questions?	All eligible respondents (dEligible=1)		Yes	1
					No	0
Q46	Interview_End	Thank you for your time. Have a nice day.	All eligible respondents (dEligible=1)	Ending of telephone script.	End	0
Q47	Referrals	INTERVIEWER: Did you make any referrals?	All eligible respondents (dEligible=1)		Yes	1
					No	0
Q48_1	Referrals2_1	Provided health teaching - specify	All eligible respondents (dEligible=1)		<open text comments>	Text
Q48_2	Referrals2_2	Referred to health unit for health teaching/programs - specify	All eligible respondents (dEligible=1)		<open text comments>	Text
Q48_3	Referrals2_3	Referred to external program - specify	All eligible respondents (dEligible=1)		<open text comments>	Text

Appendix F: Revised Data Dictionary Content for Use with the Revised Retrospective 6-Month Single Time Point Questionnaire

The contents of the table below account for the revisions indicated in Table 1 of this report (Section 3.2.3) and in the revised Retrospective 6-Month Single Time Point Questionnaire. These table rows can be transferred into the original data dictionary (Appendix E) to replace the corresponding variables when the revised Retrospective 6-Month Single Time Point Questionnaire (Appendix B) is adopted. The variables Q11_BR8, Q16_H4, and Q21_BR6 are relabeled in the table below, along with subsequent renamed response options.

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Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q7	Milk_Past_Week	In the past week, what have you fed your baby? By this, we mean what milk?	All eligible respondents (dEligible=1)	Response option (7) “No breastmilk nor formula” did not exist in original data dictionary.	Breastmilk	1
					Formula	2
					Combination of breastmilk and formula	3
					No breastmilk nor formula	7
					Don't know/Can't recall	88
					Refused	99
Q11_MR1	Stop_BF_MR1	Maternal Reasons - Problems with expressing or delivering breastmilk (including pumping and lactation aids)	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)	This variable was previously Q11_BR8 in original data dictionary (Q11_BR8 should be deleted)	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_MR2	Stop_BF_MR2	Maternal Reasons - Not enough milk	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)	This variable was previously Q11_MR1 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_MR3	Stop_BF_MR3	Maternal Reasons -	Babies who were fed formula only	This variable was previously	Yes	1

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
		Health reasons (surgery, medication, ill)	in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)	Q11_MR2 in original data dictionary	No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_MR4	Stop_BF_MR4	Maternal Reasons - Pain (sore nipples/breasts, biting)	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)	This variable was previously Q11_MR3 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_MR5	Stop_BF_MR5	Maternal Reasons - Lifestyle (smoking, diet, alcohol)	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)	This variable was previously Q11_MR4 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q11_MR6	Stop_BF_MR6	Maternal Reasons - Previous experience	Babies who were fed formula only in past week (Q7=2) AND their mother ever attempted to breastfeed (Q9=1)	This variable was previously Q11_MR5 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q13	Formula_Hospital	Was your baby given formula in hospital?	All eligible respondents (dEligible=1)	In original data dictionary the universe was all eligible respondents except those who reported their baby has never been given any formula (Q8=0).	Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q14	Age_Formula	How old was your baby in	All eligible respondents except	Determining whether baby	<0.5 months	1

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
		months when they were first given formula?	those who reported their baby has never been given any formula (Q8=0).	has been breastfed exclusively at earlier time points prior to 6 months (e.g., 2 months, 4 months). In the original data dictionary, the universe was babies who were fed formula or combination of breastmilk and formula in the past week (Q7=2 Q7=3)	0.5 to <1 month	2
					1 to <1.5 month	3
					1.5 to <2 months	4
					2 to <2.5 months	5
					2.5 to <3 months	6
					3 to <3.5 months	7
					3.5 to <4 months	8
					4 to < 4.5 months	9
					4.5 to <5 months	10
					5 to <5.5 months	11
					5.5 to <6 months	12
					6 to <6.5 months	13
					6.5 to <7 months	14
					Don't know/ can't recall	88
Refused	99					
Q16_C1	HCP_C1	Community - Midwife	Respondents who indicated that a HCP recommended giving formula (Q15=1)	This variable was previously Q16_H4 in original data dictionary (Q16_H4 should be deleted)	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_C2	HCP_C2	Community - Doctor	Respondents who indicated that a HCP recommended giving formula (Q15=1)	This variable was previously Q16_C1 in original data dictionary	Yes	1
					No	0
					Not stated	77

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
					Don't know/Can't recall	88
					Refused	99
Q16_C3	HCP_C3	Community - Lactation consultant	Respondents who indicated that a HCP recommended giving formula (Q15=1)	This variable was previously Q16_C2 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_C4	HCP_C4	Community - Nurse practitioner	Respondents who indicated that a HCP recommended giving formula (Q15=1)	This variable was previously Q16_C3 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q16_C5	HCP_C5	Community - Public health nurse	Respondents who indicated that a HCP recommended giving formula (Q15=1)	This variable was previously Q16_C4 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_MR1	Feed_Diff2_MR1	Maternal Reasons - Problems with expressing or delivering breastmilk (including pumping and lactation aids)	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).	This variable was previously Q21_BR6 in original data dictionary (Q21_BR6 should be deleted)	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
Q21_MR2	Feed_Diff2_MR2	Maternal Reasons – Not enough milk	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).	This variable was previously Q21_MR1 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_MR3	Feed_Diff2_MR3	Maternal Reasons - Health reasons (surgery, medication, ill)	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).	This variable was previously Q21_MR2 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_MR4	Feed_Diff2_MR4	Maternal Reasons – Pain (sore nipples/breasts, biting)	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).	This variable was previously Q21_MR3 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q21_MR5	Feed_Diff2_MR5	Maternal Reasons - Maternal lifestyle (smoking, diet, alcohol)	Respondents who reported experiencing difficulties or concerns with feeding their baby (Q20=1).	This variable was previously Q21_MR4 in original data dictionary	Yes	1
					No	0
					Not stated	77
					Don't know/Can't recall	88
					Refused	99
Q29	HCP_Solids	When you introduced solid foods at that time, was it	Respondents whose baby ever been given any solid food (Q27=1)	In the original data dictionary, this question was	Yes	1
					No	0

Variable Name	Variable Label	Question Content	Universe	Notes	Responses	Code
		because a health care provider recommended it?		worded “Did a health care professional recommend that you give your baby solids then?”	Don't know/Can't recall	88
					Refused	99
Q35	Ever_BF2	Prior to this baby (or these babies in the event of multiples), have you breastfed or tried to breastfeed before?	Respondents who answered Q34=0	In the original data dictionary, this question was worded “Have you breastfed or tried to breastfeed before?”	Yes	1
					No	0
					Don't know/Can't recall	88
					Refused	99
Q39	Education	What is your highest level of education?	All eligible respondents (dEligible=1)	In the original data dictionary, the first response option (1) read “Some high school”.	Some high school or less	1
					High school or equivalent	2
					Some post-secondary	3
					College/university	4
					Refused	99